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OF

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COMPRISING

Philosophy of Mesmerism,	Electrical Psychology,
On Fascination,	The Macrocosm.

Science of the Soul.

> "All are the parts of one stupendous whole,
> Whose Body Nature is, and God the Soul."

VOL. I.

NEW YORK:
PUBLISHED BY SAMUEL R. WELLS,
No. 389 BROADWAY.

THE

MACROCOSM AND MICROCOSM;

OR, THE

UNIVERSE WITHOUT AND THE UNIVERSE WITHIN:

BEING

AN UNFOLDING OF THE PLAN OF CREATION AND THE CORRESPONDENCE OF TRUTHS, BOTH IN

THE WORLD OF SENSE AND THE WORLD OF SOUL.

In Two Parts

BY WILLIAM FISHBOUGH.

PART I.

THE MACROCOSM; OR, THE UNIVERSE WITHOUT.

Nature is a harp of SEVEN TIMES SEVEN strings
On which, by God's own hand, is gently played
The ever-varied music of the spheres.

NEW YORK:
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PREFACE.

In submitting the accompanying Treatise to the public, it may be proper to precede it by a few facts and remarks relative to its origin, plan, and purpose. In the summer of 1849, on retiring from the editorial charge of a Philosophical Journal, the writer announced his intention to prepare and publish, as soon as convenient, a work on Psychology—a subject then, as now, exciting much interest among a class of readers with whom he had been holding weekly communion. A manuscript of such a work was, during the few ensuing months, nearly finished; but various circumstances and considerations arose to prevent its publication, among the chief of which were, first, that with the materials of psychological science then unfolded, I found it impossible to bring the work to a desired state of perfection; and, secondly, that facts and principles such I was then able, only, to set forth, were already rapidly forcing themselves into general notice in another way. I concluded, therefore, to await the unfolding of further light upon a subject of which, at that time, no one could claim more than a very superficial knowledge, and to postpone the publication of the results of my investigations until they were further matured, and until the state of the public mind, upon questions to which they related, gave a fair indication that some particular use, not accomplished by other developments, might be possibly subserved in submitting them to general perusal. These statements involve an explanation and apology to a large portion of my former readers, who, as I learn, felt disappointed at the non-appearance of the announced publication at the time it was expected, and whose letters of inquiry respecting it I have, in some instances, been reluctantly compelled to leave unanswered.

As investigations have been continued upon the great subject of Psychology, together with its cognate and still higher themes, it has, of course, greatly expanded; until, in the aspect which the question finally assumed, it was perceived to be impossible to give any adequate exposition of the great realm of being *within* man, without the aid of some more enlarged, systematic, and *interior* exposition than any which was yet generally extant, of the great realm of being *without* which serves to the former as a natural counterpart and exponent.

Feeling, therefore, an embarrassment at the thought of writing upon the interior constitution, laws, and susceptibilities of man, without the comprehensive basis of a general material philosophy so universally harmonized and compacted, as to bring nature without into the obvious analogy of a single human being, and thus into an aspect in which it might be constantly drawn upon for comparisons and illustrations, I accordingly determined to precede my proposed anthropological Treatise by a general disquisition upon the realm of exterior being, which I have called the "MACROCOSM," in contradistinction to the human physical and psychical constitution, which I have called the "MICROCOSM." Both Treatises were, at first, designed to be submitted in one volume; but as it was perceived that each would embrace a subject which is complete in itself, though intimately connected with the other, it was finally determined to issue them separately.

In speaking briefly of the further objects and general plan of the present work, I will premise that the whole realm of created being, natural, psychological, and even spiritual, forms (at least in the general sense) one perfectly united System, consistent and harmonious in all its parts and interactivities. To this proposition the reason and intuition of every well-constituted human mind responds an instant assent. But a reliable conception of the universal *plan* of this complex unity of created being, has hitherto undeniably been a grand desideratum of philosophy; and, reasoning superficially only from the objects which come within the scope of the five exterior senses, and without the aid of any grand fundamental and interior Principle to connect and harmonize all things, in serial and graduated orders, from the common primary cause to ultimate effects—men have cherished theories ever conflicting, ever varying, and necessarily ever disfigured, more or less, with essential errors and imperfections. I have ventured to hope that this defect in the mode of philosophizing might prove to be in some good degree supplied by a discovery, the fundamental principles of which came into my mind some four years ago, in a manner quite extraordinary, but of which I need not now speak particularly. This discovery, which I have called "*the law of the seven-fold correspondential series*," or "*the harmonial scale of creation*," is, to some extent, unfolded and applied in the present volume, though but a small portion of the evidences of its truth, and the instances of its applicability, are herein exhibited.

The main idea embraced in the discovery referred to is, that each complete system, or sub-system of creation, however great or small, is resolvable into seven serial parts or elemental degrees, corresponding to the seven notes of the diatonic scale; that, as composed of such parts, the systems are arranged side by side, or one above another, as so many octaves, corresponding to the octaves in music; and that, like them, each one serves as a general exponent of all the others, whether on a higher or lower scale. This idea, with its natural adjuncts, of which I can not here speak particularly, by harmonizing and unitizing all natural series and degrees of creation, also clearly illustrates the fact that all truths are involved in, and evolved from, one grand *central* Truth; that they are, indeed, but parts and degrees of that one fundamental truth, which are ultimated in the various forms of embodiment which compose the sum total of created existence. By pursuing the method of reasoning which this idea unfolds, I have endeavored to make one portion of the system of nature expose the secrets of another, and caused visible facts and invisible principles to mutually cast their light upon each other.

That this method might be pursued in the most reliable manner, observations are commenced upon the *surface* of the system of things, composed of those objects which are appreciable to the outer senses, and thence, by facts known particularly to geological and astronomical science, I have endeavored to rationally trace the system of outer being to its origin, to the primal condition of its materials, and to its Divine Cause. Assuming, thus, a position at the center of the universal field of thought, where all principles converge to a common focus, I have endeavored to survey, so far as possible, the vistas of creative development which thence diverge in all directions, and to observe truth in its progressive, serial, and orderly unfoldings, from center to superfices, from generals to particulars, from causes to effects, from origins to ultimates. Finding at this central position, the principles and germs of general unity and systematic order, which *must of necessity* be perpetual throughout all subsequent unfoldings, I have attempted, through a unitary and systematic order of combined analysis and synthesis, to show how the system of creation must have been gradually unfolded into its present form, and to illustrate the harmonious principles, forms, movements, laws, and interactivities which now characterize it as a whole and in all its parts.

It has thus been the object to draw the bold outlines of a comprehensive primordial philosophy, and to contribute, so far as possible, to the establishment of a system of thought, in which all truths may be viewed in their serial, orderly, and *mutually explanatory* relations, from generals to particulars—a system whose internal, vitalizing principle will constantly tend to the absorption of all truths, and the elimination of all errors, in the same way in which the principles of music constantly tend to the appropriation of harmonies, and the elimination of discords. If I have succeeded even to the extent of unfolding, with *general* correctness, the *most general* principles of such a philosophy, the sure guide-boards and indices to something vastly more perfect of the same kind may be considered as established; and the key to all conceivable truth, whether relating to nature without, the soul within, the spirit world above, or to the Divine Author and Governor of all things, may, in some sense, be considered as in our possession; for no one can essentially err in regard to either of these subjects, so long as he stands in the light of a system which makes all truths the clear and certain exponents of each other.

I would invite particular attention to that feature of the present volume, by which the fundamentals of an elevated theology are preserved and established upon the very basis of those facts in science which have been thought to be rather pantheistic in their intimations.

Following, as it does, in some respects, a comparatively unbeaten path, this Treatise can not, of course, reasonably claim entire exemption from errors and imperfections. Such as it is, however, it is respectfully submitted to a candid and discerning public, with the hope that any criticism it may excite may not be exclusively *destructive*, but in some degree also *constructive*—that it may not only expose errors and imperfections (which should be faithfully done), but suggest *improvements*—so that by the combined intelligence of many, some closer approximations to the truth may be made than I dare presume to have yet attained, notwithstanding the degree of confidence I may have in the *general* correctness of the method which has been pursued, and the results to which it has conduced. **W. F.**

WILLIAMSBURGH, *September 7th*, 1852.

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THE MACROCOSM;

OR,

THE UNIVERSE WITHOUT.

CHAPTER I.

THE COGNIZABLE AND THE COGNIZING

THE starting point of all thought and investigation with every human being, is his own interior consciousness. This, to every one, is the most absolutely fixed of all facts—the most positively certain of all certainties; and it is hence the position from which all other certainties and uncertainties, probabilities and improbabilities, possibilities and impossibilities, are estimated. But as from our individual centers of consciousness and intellection, we open our eyes and look without us, we find ourselves surrounded by appearances of various forms and conditions, near and remote, which act upon our physical, intellectual, and moral natures, and are re-acted upon by us; and these active and re-active influences are, in some sense, at a constant equipoise. There is thus a universe *without*, and a universe *within* us—a universe of cognizable forms, principles, and conditions, and a universe of cognizing faculties, the one being related to, and corresponding with, the other. It is a legitimate object and privilege of every inquiring mind to understand, in some degree, both of these universes; and in order to do this to the fullest extent, one must investigate each with a constant regard to its analogies with, and relations to, the other. For the purpose of mapping out, if possible, certain great outlines of the one united and harmonious system of truth as embracing both of these departments, an investigation of this kind is now proposed.

The forms of the outer universe are included in a few simple and comprehensive classifications, as they are arranged above or beneath each other in the scale of creation. Those beneath man, and which at present form the special subject of investigation, are embraced in the comprehensive divisions of animal, vegetable, mineral, geological, and astronomical or cosmical forms. Of these, singularly and in united groups, together with their more superficial properties, the interior soul gains a perception through some one or more of the sensational channels, known as *Touch*, *Taste*, *Sight*, *Hearing*, and *Smell*. Proceeding upon the basis of the impressions received through these avenues of sense, the *ratiocinative* faculty becomes the medium of some knowledge of the purposes and mutual relations of these, and of the laws by which they are governed; and, availing itself of the contributions of both Sense and Reason, at the same time that it draws, from its own interior and independent resources, the faculty of *Intuition* decides upon their causes, their life forces, and their more interior significations.

Conforming, therefore, to what, in this work, will be recognized as the true method of reasoning, it shall be our first endeavor, by the aid of Sense, Reason, and Intuition, to trace *analytically* the *descending* scale of creation, from exteriors to interiors, from effects to causes, from ultimates to origins. If we can succeed by this process in establishing any reliable conclusions relative to the first, the elemental, and hence germinal form and condition whence sprang this universal system of things, we may then, in the light of these conclusions, proceed to retrace our steps *synthetically* upward through the successive series and degrees of natural unfolding, and in a general way discover *how* the system of creation, in its present completed form, came to exist, and also what are the prominent principles of its constitution and government. It is obvious that these combined processes of Analysis and Synthesis, if correctly pursued, will be far more efficient in unfolding the principles and laws harmoniously pervading and governing all parts of the united system of things, and in exhibiting the vital relations and sympathies subsisting between all forms and kingdoms of nature, than either one of these processes pursued singly, and without reference to the other.

In pursuing this process of inquiry, strict attention, of course, shall be paid to facts and principles already firmly fixed upon a true scientific basis: but so long as these are made the basis of further reasoning, and the line of investigation is pursued in strict obedience to the established laws of induction and the intuitions of the interior mind, I shall not consider myself restricted from exhibiting, and, in some instances, perhaps, even insisting upon, the conclusions to which this process may conduct, even though these may, in many cases, be unknown to the prevailing philosophy.

CHAPTER II.

DESCENDING SCALE OF TERRESTRIAL FORMS.

Among the systems of forms which surround man in the outer world, that most immediately related to him, and next below him in the scale of creation, is the *Animal Kingdom.* Immediately beneath this, serving as a substratum on which it rests, and the source from which it derives its subsistence, is the *Vegetable Kingdom.* This, again, rests upon the *Mineral Kingdom*, from which, as the next degree below it in the scale of existence, it derives *its* nourishment and physical support.

Then, beneath all these kingdoms, as an anterior condition on which their physical developments, as *complete systems*, necessarily depend, is the system of *Geological Formations.* These consist of various gradations, or of lower and higher stratifications, which were developed by degrees, and in successive periods of time. Each geological formation above the primary, contains petrifactions of plants and animals of a degree of organization corresponding to the degree of progression in the earth's crust marked by the particular stratification in which they are found, the lowest organizations being associated with the most ancient fossiliferous rocks, and the highest with the most recent, showing a coincident progress in the inorganic and organic developments. Let us now trace downward the various geological stratifications, from highest to lowest, in order that our minds may, by successive steps, be conducted to the terrestrial conditions which preceded them all, and served as the material Germ of their unfolding.

If we could find a section of the earth's crust in which all the geological stratifications existed in their completeness, and were arranged on horizontal planes, in their natural order of superposition, and if we should then proceed to dig vertically downward through the strata, we would first pass through layers of loam, fine sand, and gravel, of no very great or very definite thickness. We might find in this deposit the remains of plants and animals of existing species, together with the remains of man and of his works. This is the most recent, or what is called the *Alluvial Formation.* Next we would penetrate an irregular deposit of clay, sand, gravel, and small and large stones, more or less rounded by friction, and which is called the *Diluvial Formation.* We would next pass through layers of clay, sand, gravel, marl, etc., in greater or less degrees of consolidation, portions of which abound with the remains of animals and plants of species now mostly extinct. These deposits have been roughly estimated as having the aggregate thickness of about thirteen hundred feet, and constitute what is called the *Tertiary Formation.* Next we would penetrate through deposits of chalk, and strata of marlstone, ironstone, red sandstone, etc., to the depth of not less than five thousand feet, exhuming, as we proceeded, the remains of huge saurians and other animals of a comparatively low organization, and which became entirely extinct before the next superior formation commenced. These strata, with their distinctive fossils, are comprised in what is called the *Secondary Formation.* We would then descend through a system of deposites of not less than three thousand feet in thickness, consisting of strata of limestone, slate, ironstone, and mineral coal. constituting what is called the *Coal For-*

mation. We would after this descend, in succession, through strata of limestone, called the mountain or carboniferous limestone; through what is called the Old Red Sandstone, and thence through what is known as the Silurian and Cambrian systems of deposits. These stratifications, taken together, have been estimated by Dr. John Pye Smith, as measuring a thickness of not less than one hundred and thirty thousand feet. They abound with fossils which, with perhaps slight exceptions, and these confined to their higher portions, are exclusively marine; and the character and magnitude of some of these, and their invariableness of size and constitution as they occur in all latitudes, show that a high and unvarying temperature prevailed on all parts of our globe during the period when they flourished, which could not have depended, in any great degree, upon the solar rays, but is generally supposed to have been caused by radiations from subterranean fire, then more intense than at subsequent periods. This whole series of stratifications has been called the *Transition Formation,* comprising, in the period of its production, those changes in the physical conditions of the earth's surface, which were necessary to qualify it for the production of terrestrial vegetation and the healthy sustenance of air-breathing animals.

This completes the enumeration of the fossiliferous stratifications, which, according to some estimates, are of an aggregate thickness exceeding twenty miles! These all, including the remains of the plants and animals which subsisted during their respective epochs, were quietly deposited at the bottoms of oceans, estuaries, and lakes, and subsequently consolidated and petrified, and thus, as faithful records of the natural history of our planet, they have been preserved through the untold ages which have elapsed from the period of their living existence until present time!

As we have thus proceeded through the descending scale of geological and palæontological creations, we have seen that animal and vegetable organisms, whose remains are entombed in the rocks, become more and more simple. In the lowest of the fossiliferous rocks, the principal animal remains are of the class called the *Radiata*, which somewhat resemble plants, and form the connecting link with the Vegetable Kingdom; while the plants are mainly of a simple species of sea-weed, called *fucoides*. It is, however, presumable that more minute, and still more simple species preceded these, but of which, in consequence of the delicacy of their texture, all traces have become obliterated.

Immediately beneath the fossiliferous rocks, we came to thick strata of clay slate, hornblende slate, mica slate, gneiss, etc., which contain no organic remains, and are called the *Primary Stratified Rocks.* Immediately beneath these last strata, lies the *Granite*, which is unstratified, and appears to be the original and parent rock, from the comminuted and pulverized materials of which, combined with materials descending from the atmosphere, and evolved from the central mass of the earth, all the stratified rocks were subsequently formed.

Some of my readers, who have not made geology a particular subject of study, may be disposed to inquire whether any one has thus actually digged into the earth to the depth of over twenty miles, and ascertained the character and order of geological formations to be as I have described them? I answer, no; nor would such a mode of exploration have been necessary. Owing to the immense and frequent disturbances to which the earth's crust has been subjected, in different ages, from the explosive forces of internal fires, all the older strata have, in various places, been broken, and their upheaved edges have thus been exposed at the surface of the earth, and may be measured with little difficulty. And, although in most, if not all, places, some of the strata are wanting, yet, by observing a number of the associated links in the chain of development in one place, and connecting and matching them with corresponding sections of the chain found in other places, and which extend higher or lower, the whole series may be, and has been, re-constructed with approximate accuracy and certainty. And by comparing the lithological characters of rocks, and especially the fossils which they contain, it is found that the order of development is invariably such as I have described, and is the same in all parts of the world.

It was said that the Granite, which seems to be the oldest of the rocks, underlying, as it does, all the stratified series, is itself *unstratified.* This is true, also, of its various modifications in the Porphyry, Basalt, and Greenstone. These rocks, therefore, could not have been formed, as other rocks were, by sedimentary deposits at the bottom of oceans and lakes. On the contrary, they bear unmistakable evidences of having been originally in a molten state from the action of intense heat. That no links may be wanting in the chain of our further inductions, some of these evidences require to be briefly stated, as follows:

It appears that, in many instances, after thick beds of stratified rocks, including some of the older members of the fossiliferous series, were formed immediately over the granitic rocks, the latter have flown upward, not only in hemispherical and conical, but sometimes in sharply angular forms, displacing the superincumbent strata, and producing mountain elevations. In the upheaving effort it has, apparently by injection, filled up the smallest crevices of the contiguous rocks, frequently bursting through them in various directions, forming "dykes" and veins with numerous branches, from an inch to hundreds of feet in diameter; and, coming up frequently through the entire thickness of the strata, it has flown over the top, where it has, often in large masses, subsequently con solidated. These dykes are often found to contain imbedded fragments of the identical rocks through which they appear to have forced their passage in their upward movement. The manner in which these fragments are imbedded, proves to a demonstration, that the mass by which they are surrounded was once in a *fluid state*, and that it subsequently became solid, as we now find it.

That the original fluidity of these injected rocks was pro duced by *heat*, is evident from the following, among other considerations: 1. The crystaline character of some of these rocks is such as could have been produced only by heat. 2. The chemical effects produced upon the stratified rocks by contact of the unstratified ones, are similar to those produced by dykes of recent lava. 3. The different unstratified rocks insensibly pass into each other, and indeed into modern lavas. Besides, the mineral composition of the rocks, as well as the form and position of the dykes, shows that their original fluidity could not have been the result of *water*, which is the only known natural element besides fire, to which their solution could possibly be attributed in any case.

But as the rocks of which we have spoken are *primary* rocks, and serve as the basis of all stratified rocks in all places, and as they must, therefore, have universally prevailed over the surface of the earth before any other rocks were formed, if their original state was that of igneous fluidity, it may be assumed that such was the condition of the whole globe—that it was one vast ball of molten lava! This is now generally the opinion of geologists, and is confirmed by the following, among other considerations:

1. The earth is not a perfect globe, but an oblate spheroid, flattened at the poles—the polar diameter being about twenty-six miles shorter than the equatorial. This is the form which it would necessarily have assumed from the centrifugal force caused by diurnal revolution, supposing it to have been originally in a fluid state.

2. There is good evidence that our planet is still a vast ball of liquid fire, surrounded by a thin crust, which, in thickness, bears no greater proportion to the general mass of the earth, than the egg-shell bears to the general mass of the egg. From careful observations which have been made during many years, upon the temperature of deep mines and the waters of artesian wells, in various parts of the world, it is found that, after descending beyond the reach of solar influence, the temperature *invariably increases, in all places*, at the average rate of about one degree Fahrenheit for every forty-five or fifty feet of descent. And this rule uniformly holds good to the greatest depths to which the earth has been penetrated.

Now, assuming fifty degrees as the average temperature at the surface of the earth, and taking the mean ratio of increase at one degree for every fifty feet of descent, we should, at this rate, at a depth of a little more than sixty-five miles, reach a temperature of seven thousand degrees, which would be sufficient to melt all known rocks. Supposing this state of igneous fusion to extend from the comparatively thin crust of the earth on all sides, to the center, we have still a mass of molten lava of more than seven thousand miles in diameter. If we suppose this mass to become sometimes agitated in its higher portions by internal gasses, or by the percolation of water through fissures in the superincumbent strata, we have a sufficient explanation of earthquakes, volcanic eruptions, and of the immense mountain upheavels which have occurred at different epochs during the geological formations; while, aside from the hypothesis of internal fusion, the solution of these latter phenomena would be extremely difficult, if not impossible.

Thus have geologists reasoned, from substantial data, concerning the early state of our planet. But, though at this point the data of retrospective reasonings become less certain than those which have hitherto guided us, we may presume, as highly probable, not to say absolutely certain, that not even *this* was strictly the *primitive* state of our planet—that the matter which composes it was in conditions anterior and germinal even to this; and if we extend backward our chain of analogical inductions *in a direct line*, it will lead us to a condition of still more intense heat—heat that would be compatible only with the existence of matter in the form of *vapor*. It is, then, to say the least, an hypothesis certainly not *unreasonable*, that the matter of our earth was once in the state of igneous gas, from the cooling and condensation of which it assumed successively the fluid, and then its present superficially solid state. But for the present we offer this *only* as an hypothesis to which analogies thus far developed, directly point. Such further and more conclusive evidences of its truth, as scientific data now afford, will be incidentally brought into view as we proceed.

CHAPTER III.

THE NATURAL HISTORY OF THE SOLAR SYSTEM ANALOGICALLY RETRACED.

ADMITTING that the foregoing hypothesis as to the original condition of the earth's materials has any foundation in truth, we find in it the link which connects geology with astronomy. It must be borne in mind that the earth is only one member of the great family of planets belonging to the solar system; and it is fair to presume that the brothers and sisters of the same planetary family have the same, or a similar, origin—especially as they have the same oblately spheroidal form, and observe the same laws of diurnal and orbitual revolution. If the earth, then, was originally in a state of igneous gas, so (we may suppose) were *they;* and before the incipient processes of spheroidation commenced, the materials of all of them may have commingled, and probably *did* commingle, together in one undistinguishable mass.

Though this hypothesis of an original gaseous state of the earth and planets rests upon a foundation of its *own* (being a portion of the chain of analogous developments prolonged directly backward from the links of substantial geological facts), it is precisely in accordance with the *nebular theory* of the origin of worlds and systems, which theory also rests upon independent grounds of reasoning. As a conviction of the general truthfulness of this theory is important as a basis of ulterior ideas to be presented in this treatise, the patient attention of the reader is solicited while we briefly explain its nature, and unfold a summary of the evidences on which it is founded.

The idea that nebulæ, or loose masses of fiery vapor, which seemed to be floating in the depths of immensity, might form the materials out of which nature elaborated suns and planets, was originally propounded as a conjecture, by Sir William Herschel; but it was subsequently brought into more definite and tangible form by Laplace, Comte, Nichol, and others. The theory supposes that loose masses of nebulous vapor, at first without definite form or movement, gradually assumed, by virtue of gravitation, a regular spheroidal and rotating form, lightest at the circumference, and gradually increasing in density toward the center, at which point the greatest density is attained. It supposes that such forms were the original forms of suns—that the substance of these, in this diffused state, originally extended from their present condensed, solar spheres, to the outermost limits of the planetary systems which now revolve about them; and that by the combined processes of rotation and further condensation, successive and concentric rings were formed on the outer limits of the nebulous disks, of which we have a faint illustration in the rings of Saturn. These rings, it is thought, subsequently became broken up, when the matter composing them naturally agglomerated into spheres, which, by an analogous process of condensation and evolution of rings, produced planets and their satellites.

It is but just to remark that many of the supposed *nebulœ* which Herschel thought might form the materials of future suns and systems, have subsequently, by the application of powerful telescopes, and especially that of Lord Ross, been resolved into stars, apparently so close together as to cause the general hazy appearance which they present when viewed with the naked eye, or through a telescope of low power. It is reasonably suspected that many of the still unresolved nebulæ might yield to a still higher telescopic power, were such available to science and art; and acting upon this supposition, some few astronomers have abandoned the nebular theory, in which they previously believed, and attempted to prove its impossibility. But in reference to this change of astronomical faith from *such* a cause, Professor Michell forcibly remarks, that "Herschel only adopted the [nebular] theory after he had resolved many hundred of the nebulæ into stars; and, if there ever existed a reason for accepting the truth of this remarkable speculation, that reason has been scarcely affected in any degree, by recent discoveries."

The phenomenon of *nebulous stars*, especially, still remains in its unimpaired force, as an argument for the probable truth of the theory in question. These stars are spherical bodies, bright in the center, from which there is a gradual shading off into undistinguishable dimness as the circumference is approached. They exist in all degrees of apparent concentration, from a diffused blur with a no very distinct nucleus, to a well defined star surrounded by a haze. What can these bodies be but masses of primeval matter, in various degrees of progression between their original, or most chaotic state, and that of fully developed suns and planets? But these are precisely the various conditions which the nebular theory supposes to take place during the different and progressive stages of the process by which suns and planets are ultimately formed.

A brief summary of the further proofs of the nebular theory may be presented as follows:

1. It has already been remarked that the earth is an oblate spheroid, flattened at the poles and bulged at the equator.

This same fact is also observed in relation to other planets, the *outer* ones, owing to the greater rapidity of their rotatory motions, being much more bulged and flattened than the inner ones. To the writer it is not a little surprising that this form of planetary bodies has not, of itself, established among astronomers the universal conviction that these bodies were formed by a *contraction* of their materials from a previously diffused state. Such, it appears, must necessarily have been the case, if their superior equatorial diameter had, in its origin, any connection with the centrifugal force produced by rotatory motion. For if the materials of the planet, while in an originally globular form, had *commenced* being thrown *outward* at the equator, by the centrifugal force generated by revolution, no known counter-force could have prevented them from being all, or nearly all, thrown outward, and continually farther and farther from the center, until the planet would have lost its identity. Especially would this have been the result, if the original velocity of revolution had continued undiminished. For it is evident that the farther a particle, or collection of particles, is thrown from an axis around which they, in a given period, may revolve, the greater is the centrifugal force generated by the rotation, and hence the greater is its tendency to fly off still farther; while, on the other hand, the farther a particle is thrown from a center of attraction, the less becomes the attractive or centripetal force to retain it from flying off still farther.

The forces which produced the bulged form of planets at the equator are undoubtedly the same as those which produced the rings of Saturn. Now, the rings of Saturn complete a revolution in 10 hours 32 minutes and 15 seconds; while the primary itself revolves in 10 hours 16 minutes and 1 second, or in a period of only 16 minutes and 14 seconds less. If, therefore, there was originally generated, by rotatory motion, at Saturn's equator, an amount of centrifugal force sufficient to throw off particles to the present position of the rings of that body, certainly the *immensely increased* centrifugal force generated by the revolution of those rings in about the *same period*, would have thrown the *same* particles still farther, and would probably have dissipated them into chaos—especially as the attractive force of the primary, at that distance, must have exerted considerably less influence upon them.

The same reasoning applies with equal force to that ring, or circle of *attached* matter, which rises above the line of sphericity at Saturn's equator, and also at the equators of other planets, and of the earth. The acting forces are of the same nature, and bear similar relations to each other in both places, the only difference being a difference in the degrees of intensity with which they act in the different positions.

These considerations show that in all stages of the process by which planetary bodies were formed, the *attractive, contractive, or centripetal force, had decided predominance over the centrifugal.* Supposing the two forces to have always acted together after both became established, the centrifugal force, it is true, must have always *restrained* and *modified* the intensity of the centripetal, in the direction of the plane of rotation, but could never throw farther into space a particle which the centripetal or attractive, had succeeded, in defiance of the opposing, force, in bringing from a greater to a less distance from the center.

The bulged form of the earth and other planets, therefore, *could not* have been produced by a *throwing out* of particles at the equator, but rather by a *drawing in* of particles from the poles, where the attractive force was comparatively more strained by the centrifugal; while this latter force, attaining its maximum at the equator, meets and wards off the gravitating particles in their rush toward the center, and thus the two forces finally settle into an exact equipoise, of which the oblately spheroidal form of the planet is an equally exact expression.

These considerations seem to sufficiently prove that the earth (before shown to have been originally in a state of igneous, if not gaseous fluid) was formed by the predominating force of attraction, and hence *contraction*, acting upon materials in a rarer state, and reducing them to their present dense form. The attractive and contractive operation must, of course, have proceeded through a progressive series of analogous stages, which somewhere must have had a *beginning;* and we can not conceive of any possible beginning short of the greatest possible diffusion—a state of diffusion which, originally applying to the materials of all planets, must have brought them all into the form of one common vapory mass.

Though this argument, in proof of the nebular theory, seems hitherto to have generally escaped the notice of astronomical writers, it is one which, nevertheless, deserves to be pondered and borne in mind.

2. Another argument for the same theory, is derived from the regular gradations of densities of planets, from innermost to outermost. Thus it is stated, on the basis of mathematical calculations, that Mercury must be about the weight of so much lead; Venus is nearly six times the weight of so much water; the Earth, as a whole, is four and a half times the weight of water; Mars is a little over three times the weight of water; Jupiter is a small fraction over the weight of so much water; Saturn is less than half that specific weight, or

about the weight of so much cork; and Herschel manifests a corresponding decrease of density. This regular gradation in the specific densities of the planets, in the order of their occurrence, from innermost to outermost, is precisely what it should be, supposing that they were all formed by the operations of a common law, from an original sphere of fluid matter, which must have been most dense near the center, and most rare on its outer extremities.

There is a similar relation between the *distances* of the different planets; for, proceeding outward from Mercury, each successive planet (including the asteroids as equivalent to one planet) is about *double* the distance of the previous planet from the sun. This curious relation of distances seems, in like manner, to argue their production by a common cause, and by the operations of a common law, of which the only explanation yet found seems to be given in the nebular theory.

3. If the theory in question is admitted as the true one, it might accordingly be supposed, that after the evolution of Mercury, which is the planet nearest the sun, there would still be a residuum of nebulous or planetary matter in an unformed state, surrounding the more dense mass of the sun. Accordingly there actually appears to be an extensive mass of attenuated matter surrounding the sun, and is sometimes visible immediately after sunset, or before sunrise, as a conic, luminous streak, projected from the horizon in the direction of the path of the sun, and which is called the "Zodiacal light."

4. There are still many planets, or *wandering* celestial bodies, in a *nebulous state*, in which state they are called "comets." These appear to have been formed from a residuum of attenuated matter, after the agglomeration of the denser materials took place

5. M. Comte, of Paris, has proved, according to principles by which periods of rotation maintain a relation to the mass of the given rotating body, that the sidereal year of each planet actually corresponds to the period in which the sun must have rotated on his axis, supposing his mass to have extended to the orbits of such planets; and he also ascertained that the periods of rotation of the primary planets with their mass, in a state of vapor, extending to the orbits of their satellites, must, in like manner, have corresponded with the present orbitual periods of those satellites.

6. A new planetary law has recently been discovered by Mr. Kirkwood, which seems to have an important bearing on the question at issue. This law, as I understand it, is, that the square of the number of rotations of any given planet in its year, is to the square of the number of rotations of any other planet in its year, as the cube of the diameter of the sphere of attraction of the first planet, is to the cube of the diameter of the sphere of attraction of the second planet.* Thus, for instance, the number of rotations of the earth in its year, bears a definite relation to the quantity of matter (or the amount of attractive force) in the Earth, in Mars, and in Venus.

Here, then, is an indication of another relation existing between the forces and movements of the different planets, so definite as to preclude every reasonable supposition that it came by *chance*, and a relation which, in common with facts before noticed, seems to refer all the planets to a common parentage, and common law of production, which is accounted for only by the nebular theory. Certainly so many remark-ably concurrent facts, pointing to the same conclusion as to the origin of our planetary system, can not reasonably be set down as so many mere fortuitous coincidences.

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* The sphere of attraction of a planet, is a circle whose radius is determined by the point between two contiguous planets in conjunction, where an object would be attracted to neither of them, but would be exactly poised between the two contending forces. For an account of Kirkwood's discovery, see Silliman's American Journal of Science, Vol. ix. Second Series, p. 395.

Finally, the theory in question is the only one which does not either involve inexplicable and inconceivable mysteries, or suppositions totally unfounded in any of the known laws of causation. This theory, on the other hand, commends itself to human reason and intuition, without being encumbered with any serious difficulties; and, as it is confessedly unphilosophical to look for an explanation of a phenomenon *without* the sphere of known natural laws, when a full explanation may be found within the sphere of those laws, the nebular theory may be considered as *established*, at least until it is invalidated by further discoveries.

CHAPTER IV.

THE NATURAL HISTORY OF THE SIDEREAL UNIVERSE ANALOGICALLY RETRACED.

From contemplations of our own solar system, let us now extend our observations and reflections into the immeasurable realms of the stellar universe beyond, and see what gleams of light we can obtain in reference to the natural history of that grand System of systems, of which our own congeries of worlds forms, as it were, but an atom. Facts and analogies which need not here be particularized, have established the universal belief among astronomers that the so-called "fixed" stars are but so many remote suns shining to other systems. These are not distributed equally through the celestial spaces, as though they had been scattered at random from an Omnipotent hand; but they are arranged in distinct *clusters*, or firmaments, so called, which have little or no apparent connection with each other. Telescopic observations have proved that the bright girdle called the "Milky Way," which surrounds our heavens, is only a grand congeries of stars, so remote, and owing to their remoteness from us, apparently so near to each other, that their intermingling rays reach us only in the appearance of a confused whitish light. Of this vast zone of shining orbs, all the less remote stars, including our own sun, are members, their varying directions being, in a measure, the result of differences in their distances from the point of observation, and hence, of the different angles at which they are viewed

Not only have the relative distances of various portions of this grand cluster been proximately determined, but the spaces beyond have been sounded. The process by which these results have been accomplished, may be easily brought within the reader's comprehension by the following illustrations. Suppose any given object is removed from a point of observation to a distance at which it is barely discernible by the naked eye. Now, a telescope which has the power of penetrating space to ten times the distance that can be reached with the naked eye, would show that same object, with the same degree of distinctness, ten times as far off. Take, then, a telescope of twenty degrees of space-penetrating power, and remove the object twenty times its first distance, and it will still be seen with equal distinctness and apparent nearness. And so also of still larger telescopes and correspondingly farther distances.

Now, when we gaze into the heavens on a clear night, with the naked eye, we observe, in any given portion of the Milky Way a distinct number of stars, the faintest of which are barely discernible. If the astronomer, then, takes a telescope of ten powers, as compared with the unassisted eye, and surveys the same field, all the stars before observed will appear with increased brilliancy, besides which many more will be visible, the remotest and faintest of which may be presumed to be ten times as far off as the farthest ones which previously appeared. He then takes a still larger telescope, and still more objects appear, the remotest of which may, in like manner, be presumed to be situated in a relative depth of space proportioned to the increased degree of telescopic power. So correspondingly of a larger, and still larger, instrument, until one is obtained which reveals no more stars, but only shows those in the same field of view, in increased brightness. The space-penetrating power is again augmented, and still no more stars are brought into view. The observer, therefore, legitimately concludes that he has reached the *outer limits* of the great cluster to which we belong, and is now traversing the blank void beyond.

But is he to conclude that he has sounded the system of stellar creations to its remotest depths, and that beyond these boundaries, there are no more vestiges of the Creator's energy? Let him augment the optical power but one degree more, and perhaps in the dim and awful distance he will behold a faint and scarcely discernible speck or streak of whitish light. In the excitement of irrepressible curiosity, he hastens to direct to the spot the largest telescope the observatory affords, and that same whitish spot glows into myriads of beautiful stars—another galaxy or Milky Way—another firmament, perchance, displaying its glories to its own unnumbered worlds, and pealing its own notes of silent harmony, responsive to the movements of all kindred systems!

As by the indefatigable exertions of the two Herschels, the heavens have been swept by the telescope in all directions, more than two thousand five hundred of these isolated stellar systems have been brought to light, some smaller and some larger than the grand cluster in the midst of which our own sun and system are situated.

Let us now look at some of the phenomena which these vast starry congregations present, and from which inference may be drawn as to whether, in regard to their internal structure and laws, and hence their modes of origin, they have any thing in common with our own solar system, and whether the analogies of one may be applied in unfolding the mysteries of the other.

And the first thing that naturally attracts attention in such an investigation, is the shapes and apparent relative densities of these starry clusters. By telescopic measurements of relative distances in relative directions, accomplished in the manner before illustrated, Sir William Herschel decided that the great cluster, of which our own sun is a member, and of which the greater portion of stars, owing to their immense distances, seem to rest on one general plain, and surround us in the great zone called the "Milky Way," is of an irregular form, approaching that of a circle, but thick in the middle, and thin toward the edges, in one of which there is a horizontal split or opening. Other clusters are of all conceivable forms, but of these forms the round, or oblately spheroidal, most prevails. Even in elongated, curved, angular, and branching clusters, there are often apparently several centers of incipient rotundity. Generally these centers are well defined, and toward them the stars, though with an inappreciable motion, are apparently flowing from all directions, becoming thicker and more compressed as they approach, and being thinner, and gradually shading off into invisibility, at more distant removes.

The general uniformity in the appearances of these spherical aggregations, and especially of their comparative denseness in the center, which thence gradually and regularly diminishes, in all directions, toward the circumference, shows that their aggregation is governed by some grand law; and what can this be but the familiar law of *Gravitation*—that identical law which, in the same form of action, is so potent in our own system, giving sphericity to every collection of fluid particles, from those which compose the planet, to those which form the dew-drop? It is gratifying to find in those remote creations such distinct indications of a property which is possessed in common with our own system, and which binds the nearest and remotest forms in the celestial spaces, in one common bond of sympathy and brotherhood.

But the discovery of the law of gravitation, as applicable to these distant worlds as well as to the orbs of our own planetary system, naturally engenders the presumption that the *whole series* of laws and general operations with which gravitation is here necessarily connected, applies to them also, with little or no modification. And a further inquiry will disclose celestial phenomena which tend greatly to strengthen this presumption, if not to convert it into a positive conviction.

Contemplating our own solar system, we are struck with the fact that revolutionary motion every where prevails. The planets are constantly whirling upon their axes, and performing their grand orbitual circuits in the heavens. The sun himself rotates upon his own center, once in about twenty-seven days. This revolution has been ascertained by the periodical variation of the position of spots on his disk.

But several of the stars of our firmament exhibit a phenomenon similar to this, from which our sun's rotatory motion has been inferred. That is, they alternately, and in *regular periods*, give forth a greater and a less degree of light, as though they had a brightest side and a side of a less degree of brightness, which were alternately, and at regular intervals, presented to us by a revolution upon their axes. This is one of the facts which have confirmed astronomers in the otherwise very natural presumption, that the stars are suns like our own, and whose apparent diminutiveness is only owing to their immense distances.

There are also many instances in which the varying relative positions of two or more stars are such as to indicate a revolution around each other, and around a *common center*. Some of these stars have vast periods, as, for instance, the double star Castor, whose constituents revolve around each other in 215 years; Gamma, in the constellation of the Virgin, whose constituents revolve in 628 years; Gamma of the Lion, whose constituents revolve in 1200 years; and Mizar and Alcor, in the tail of the Great Bear, which, according to Professor Nichol, would probably consume not much less than the inconceivable period of 190,000 years in completing a single revolution around each other! Others accomplish their revolutions in much less than 100 years.

By establishing the fact that rotatory and orbitual motions are experienced by many of the stars, the extreme probability is at the same time established on analogical grounds, that similar motions are experienced, with, perhaps, some modifications, by *all* stars. We are, at least, not without strong, not to say demonstrative evidence, that motions of this kind are going on in the celestial spaces, on a much grander scale than any we have yet described. By comparing the positions of the stars in the modern heavens with their positions as represented in ancient catalogues, Sir William Herschel found that in one quarter of the firmament, they were apparently drawing nigher together, while in the opposite quarter they were apparently receding from each other. To account for these changing appearances, Herschel conjectured that our own sun, with all his retinue of planets, was moving in some grand path toward a point in the constellation Hercules. After much doubt and many critical examinations, subsequent investigators have succeeded in establishing this opinion on an indubitable basis.

But in the hands of Argelander, Struve, Peters, and especially of Maedler, the theory of this solar motion was made to assume still more definite form. Inferring, with others, from analogy, that the path described by our luminary must be the curve of an orbit around some remote center, the latter of these astronomers betook himself to the examination of ancient catalogues of stars, with a view to ascertain if there was any discoverable district in the heavens where all the apparent motions of the stars were such as to comply with the conditions which must necessarily characterize a central region. Such a district was found; and the star ALCYONE, in the cluster Pleiades, was decided to be its center. Around this point, therefore, our own sun, and the whole firmamental cluster to which it belongs, were supposed to be revolving with immense velocity, in orbits coincident with the general plane of the Milky Way, and requiring no less than eighteen millions of years to accomplish a single revolution!

Whatever diversity of opinion there may exist relative to the legitimacy of the conclusion of Maedler, which locates the center of alleged orbitual motion at the point occupied by the star Alcyone, I believe it is now generally, if not universally admitted by astronomers, that such orbitual motion does exist around *some* center, not very remote from that region.

The evidence upon this point greatly strengthens the analogy which, of itself, points to the conclusion that those isolated globular and other clusters of stars, situated in the remoter realms of space, and which appear to have been aggregated by internal power of gravitation, are also scenes of perpetual rotatory and orbitual motion. Did not these motions, with their resultant centrifugal forces, exist to countervail, in some degree, the force of internal gravity, those firmamental clusters would doubtless exist in much more dense masses than those in which they now appear.

But if this conclusion thus approximates to a certainty, there are facts which point to a still more extended application of its principles. In the southern heavens, and quite detached from the Milky Way, are two bright spots which southern navigators have designated by the name of "*Magellan's Clouds.*" During his astronomical residence at the Cape of Good Hope some years ago, Sir John Herschel, by the aid of his twenty feet telescope, succeeded in analyzing these objects, and found that each of them, and especially the larger one, was a *system of firmaments*, combining many extensive clusters into one! Of these, *as* systems, analogy would authorize us to predicate internal gravity and general and particular rotatory and orbitual motions. But the magnitude of this complex unity, however inconceivably great, may, after all, be but an atom in the immensity of ulterior creations to which it belongs; and, on the bases of its analogies, we may rise to the ideal of a still higher system—a system which may be supposed to embrace in its structure all the firmamental clusters, nebulæ, and systems of systems heretofore known to telescopic observers, and countless more besides.

Nor is the idea of such an all-comprehensive system of systems without the support of facts, as well as of analogies. It is said that although nebulæ, resolvable and irresolvable, appear in every quarter of the heavens, they appear in greatest abundance in a comparatively narrow zone which encircles the heavens, cutting the plane of the Milky Way at right angles. This arrangement goes far to establish the idea of a Frimament of firmaments, a Galaxy of galaxies, in which all sidereal creations which have come within the reach of the most powerful telescopes, are bound together in one common structure, brought within the sphere of the same common laws, and made to observe throughout, similar rotatory and orbitual motions with those which prevail in our own solar system, which latter may be considered as an epitome and representative of the whole!

We have thus seen that wherever the wonders of the celestial spaces have been distinctly unfolded, the revolution of satellites around planets, of planets around suns, of suns around still greater suns, of systems around still greater systems, of clusters around still greater clusters, is revealed as an omniprevalent law. And seeing the complete unity of plan and harmony of operations so far as we have gone—seeing the affectionate co-relations which are exhibited between molecules, and worlds, and systems, and all stellar congregations, with all their included parts—may we not prolong the chain of analogy one link farther, and conclude that they all, together with the myriads of similar creations which dwell in depths of space which no optical power can ever penetrate, owe the bond of unity which connects them, and the harmonial influence which wields them in their mighty courses, to one grand Source of central power, whose attractions they all implicitly obey, and from whose genial radiations all receive their life? If the links of the analogical chain have been found to closely adhere through all the labyrinths of every realm of being whose existence may be verified by other processes, who shall begin to distrust that chain for the first time, after it has conducted us safely thus far?

Though the hypothesis of a common Pivot and Center of gravity of the whole universe may not, in the nature of things, be susceptible of an ocular or complete mathematical demonstration, yet there is interior evidence—I had almost said even the evidence of intuition—that it is true in *some* form; and believe this idea is now extensively received as an article of astronomical faith.

Let no one suppose that amid these inconceivable distances and magnitudes, the fixed principles of reasoning lose their validity and become untrustworthy. It is true that in these giddy flights, the imagination and conceptive powers become lost and bewildered; but so they do, in a great degree, before we have traveled beyond the immediate neighborhood of our own mundane sphere. The distance from the earth to our own sun is measured by millions of miles; and even this, as one of the shortest of astronomical distances, the imagination can but faintly conceive. The distance from the sun to the stars is measured by millions of diameters of the earth's orbit; the distance from firmament to firmament is measured by millions of interstellar spaces; the distance even of the *most interior* firmament from the great Center of all centers, may, in the efforts of the imagination, be measured by millions, or even billions of inter-firmamental spaces; and the circumference of the whole Grand Structure, may even transcend all human conceptions of *infinitude;* yet form, locality, relative position, center, circumference, and hence *limits*, must exist as absolutely as they exist in the smallest spherule of matter visible to the human eye; and to the view of an absolutely infinite Being, the whole Universe of universes may be of comparative dimensions not greater than a single grain of sand! And if Ehrenberg could, by the aid of the microscope, descry a whole animal kingdom in a single drop of water, each individual of the myriads of whose animated forms must have had eyes, teeth, stomach, intestines, and all the appurtenances of a complete anatomical structure, governed by unvarying physiological laws; and if by the same means he could demonstrate that a particular geological deposit, fourteen feet thick and miles in extent, was made up almost exclusively of the skeletons of animals, forty-one billions of which could exist in a single cubic inch, then we may rest assured that the principles of nature exist in no greater completeness, and in no higher or more inconceivable compli cations, in *infinites* than they do in *infinitesimals.* We may, then, without crowding out any natural principle, or doing violence to any just method of reasoning, reduce the scale of the universe, in our imagination, to dimensions convenient to be contemplated on all sides, and follow out our reasonings with ease and comparative certainty respecting its properties, forces, laws, internal arrangements, and progressive processes of formation, from beginnings to ultimates.

Considering, then, all general natural principles as applying equally to greatest and to smallest analogous cosmical forms. and to the whole universal structure as well as to its individual parts, we proceed to another branch of the chain of analogical reasoning, which will speedily conduct us to the primal condition of the *substance* from which the material universe and all it contains, was organized.

The nebular theory of planetary and solar formations, as applying to our solar system, has been shown to rest on so many probabilities as seemingly to justify the undoubting conviction of its truth. But if this theory is admitted as applicable to our own solar system, its applicability to formations in the sidereal realms will, after the foregoing system of universal analogies has been traced out, scarcely be disputed, especially as it was in the sidereal realms that the first facts were observed which seemed to intimate its truth. And if all planetary and solar agglomerations originated from previously diffused nebulous masses, then, in view of the unbroken chain which, we have seen, binds all systems together as *one* system, the following statement is its own sufficient proof:

As the satellites were formed from the same original nebulous mass from which the planets originated, so a prior state of that mass was a state of unity and interdiffusion with the mass which composed the sun. The materials of *that* mass, in like manner, were previously connected and interdiffused with the mass which formed the more *interior* sun around which *it* revolves, and out of which were formed all such other ultimate suns as, in common with our own, now revolve around the same center. The substance of all suns and systems composing our firmament, may be supposed also to have been previously interdiffused in one amorphous, undistinguishable mass. So the substance of the suns and systems of all other firmaments, together with the substance of the great central sphere of universal attraction which binds and subordinates them all, was, in like manner, in an original nebulous and formless state; and the whole universal substance was then but *one* substance, so highly attenuated and expanded as to be without definite forms, divisions, or compartments—an indefinable, universal MONAD! In short, as our own solar system is a child of the great Universal System, and is formed in the image of its parent, the primal condition of the materials of one, must have been precisely analogous to that of the other; and if the solar system germinated from an original nebulæ, so did the system of the whole universe.

But in thus unraveling the complexity of all material formations, and tracing them all to an original, unitary, and chaotic state, we at the same time unravel the complexity of *motion*, and not only arrive at its original and simplest form, but at a state in which it must necessarily have had *no* form—a state in which its principles were as chaotic as original matter itself, or, what is the same thing, at a state in which *no established motion existed.*

We have thus arrived by an easy, and, admitting our premises, an apparently certain, process, at the very root of the Tree of universal material creations—at the great unitary Germ of all firmaments, suns, systems, and worlds, with the mineral, vegetable, animal, and human forms which dwell upon their surfaces. If there has been any error in the foregoing reasonings, it has probably been an error in the *form* rather than in the *principles* of our conclusions, and the error therefore does not essentially effect the main object contemplated in this disquisition. But of the truth of the position to which we have arrived by this analytical process, from ultimates to origins, or from effects to causes, additional evidences will hereafter incidentally occur as we proceed, by an opposite and *synthetical* process, from causes to effects. The two processes will serve as mutual correctives of each other; and by the aid of both united, we hope to somewhat enlarge our truthful conceptions in relation to those principles, laws, and operations of the universe *without*, which naturally lie beyond the province of mathematics and ocular demonstration, but which, nevertheless, have their counterparts, representatives, and exponents in the universe *within.*

CHAPTER V.

MATERIAL BEGINNINGS AS POINTING TO A SUPER-MATERIAL CAUSE.

HAVING thus traced the system of material creation through a series of anterior conditions, comprehending periods which, perhaps, no assemblage of arithmetical figures could express, to a state in which the materials of all worlds, systems, and firmaments, were in a condition of diffused attenuated vapor, with no definite or established motions, the inquiry next arises, Was even *this* the absolutely *primitive* state of material things? Did matter ever exist in any *form* or *forms* previous to this state of chaos? or, if not, was it, in this state, eternal? or, if not absolutely eternal either in the state of forms or of chaos, whence and how did it originate?

The idea that matter ever existed in any mundane forms previous to this, and became subsequently dissolved, not only has no analogy to support it, but seems to be contradicted by an established law of nature. I refer to that law by which amorphous or chaotic matter in motion has the general and predominant tendency to assume and multiply *forms.* It is not denied that motion of particles tends also to the *dissolution* of material forms, but that dissolution is always subservient to immediate and higher recombinations. The kingdom of motion and forms, therefore, have ever been, and still are (and we may confidently believe ever will be), making farther and farther encroachments upon the realms of chaos and inertia; and whatever is conquered by the former can never be *fully* reconquered by the latter. And this is because the former power is positive, and the latter is negative.

If matter, therefore, was ever in a state of mundane or organized forms previous to the chaotic state now under contemplation, it must have for ever continued in that same general state, and even to progressively unfold the tendencies by which its forms were assumed; and no natural power could have brought it back again to the formless state. The chaotic or nebulous state in which we have seen it must necessarily have existed at the beginning of the cosmical creation, may, therefore, be inferred to be its *primitive* state.

But that matter, even in this indefinite state, was absolutely *eternal*, is an idea which analogy, so far as it speaks upon the subject, distinctly contradicts.* The material of each form and kingdom in nature may be traced *backward* from highest to lowest developments, immediately beyond which latter it loses itself in a more rudimental creation, which serves as its groundwork. Thus the animal kingdom, traced downward to its lowest and simplest forms, finally loses its character as animal, and merges into the vegetable; the vegetable, in like manner, finally loses itself in the mineral; the mineral or crystalline forms pass downward into the general amorphous mass of planetary matter; planetary matter may be traced downward through more rudimental geological conditions, and through igneous liquid, and aeriform fluid, until its distinction is lost in planetary nebula; this, in imagination, may be traced, in like manner, until it is lost in the general gaseous mass of the uncondensed sun; and so we may proceed, in retrograde steps, until we find the materials of all forms and kingdoms are lost in the great common mass of original chaotic matter.

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* Let it be remarked, once for all, that by "matter," I mean *physical substance* in contradistinction to *spiritual* substance.

But in thus tracing back all forms and kingdoms to their respective and immediate predecessors, we at the same time trace backward the one and analogous kingdom of *Universal Matter as such* (which includes all the other kingdoms), from *its* highest to its lowest forms; and as there is a point beneath which all kingdoms lose their identity, and their essences are merged in an anterior kingdom, so analogy would seem to indicate that there is a prior point of attenuation and refinement at which the great kingdom of Matter also loses its character *as* matter or physical substance, and thus that it originated *as* matter, from a prior source, as did all its included sub-kingdoms. This idea would appear in greater clearness and force of probability, if contemplated in the light of the doctrine of Series, Degrees, and Correspondences, hereafter to be brought into view; and it will receive incidental confirmation as we proceed to consider the origin of Motion.

If (contrary to an extreme probability, not to say absolute certainty, established in previous remarks) the hypothesis is still insisted upon, that the chaotic matter of which this universe is composed, consists of the dissolved elements of a previous material universe, the question will still arise, Whence originated the matter composing *that* universe? And so we may extend our inquiries back through a thousand imagined pre-existent universes; but the mind must come to a resting-place *somewhere.* It is logically just as certain that there was a *first* universe (if we are mistaken in supposing that *this* is the first), as it is that there was a first vegetable form or class of forms, which latter proposition is positively demonstrated by facts in geology. And after we have gone back in imagination, to an absolutely *first* universe, the question will still return unanswered, Whence originated the physical substance composing *that* universe?

As the line of progression traced backward necessarily leads to a *beginning* of the system of developments to which it applies, so the line of causation, inversely traced, necessarily leads to a *First* Cause, which is itself *uncaused*, though containing in itself the elements of all causes, and hence all existences. And as the whole Animal Kingdom, for example, necessarily rests upon the basis of a prior and immediately corelated and correspondent Kingdom—the Kingdom of Vegetation—so the whole Kingdom of *universal materiality*, so to speak, as necessarily rests upon the basis of a prior and immediately corelated and correspondent Kingdom. This Kingdom, then, must be *ultra*-physical, in the same way as the Vegetable Kingdom is ultra-animal; and it must differ in nature and constitution from the whole Kingdom of physical substance, at least as much as the Vegetable Kingdom differs from the Animal, or as the impelling and moving essence of the human mind differs from the impelled and moved essence of the human body.

Now, unless we suppose this ultra-physical (and hence *un*-physical) Kingdom to be a Kingdom of *Spirituality*, there is no conceptive power corresponding to it in the human mind, and hence it is to the human mind a *nothing*, and can not even be an object of thought, much less of faith.

But it may be asked, "Whence originated this Kingdom of Spirituality, which it is here alleged must have served as the basis of physical creation?" If we should answer that it originated in a higher and ulterior spirituality, and that *that* originated in a still higher, and *that* in a still higher; and if we could thus prolong our thoughts to an absolute eternity and in search of the Origin of origins, we would still have only *spirituality*—an INFINITE REALM of Spirituality, beyond the idea of which our thoughts could not possibly go. We may set it down, then, as a conclusion which all analogy affirms, and which there is no conceivable reason to doubt, that this whole realm of Materiality, originated in this prior and correspondent Realm of SPIRITUALITY.

Now, spirituality, in its interior nature, possesses the properties of *affection*, *thought*, and *volition*, and these, again, are the attributes of *personality*. This ultimate, and hence infinite, Realm of Spirituality, therefore, involves the idea which we mean to convey by the term GOD: and the infinite series of *degrees* of spirituality of which the mind has just conceived in its search after the Origin of origins, may be supposed to correspond to the infinite series of degrees of the harmonious faculties of the one Infinite God, as these may be supposed to be represented in their ascending scale, from the most exterior portion of the Divine nature which connects with Materiality, to the most interior portions of the Divine Soul, which projects, generates, and vitalizes all things.

In saying, therefore, that the whole Kingdom of Physical Substance as such, originated in a prior and corresponding Kingdom of Spirituality, we, in effect, say that it originated in a Source possessing affection, intelligence, volition, and hence *personality*—in a Being, who, without any restraint or constraint from outer and physical influences (which did not then exist), could freely create, or abstain from creating, according to the internal promptings of his own Infinite Mind.

But let me not be understood as arguing that the matter of this universe was created by God out of *nothing*. The mind can not conceive of any such thing as nothing, or of something coming out of nothing; and therefore the idea may be at once dismissed from the mind as being itself a mental *nothing*. But if we suppose that spirit is an *essence*, and that matter, as such, was created out of this essence, there will at least in this be no violation of the laws of thought; and the reasons on which such suppositions may be grounded will incidentally and more distinctly appear as we proceed.

There is a philosophy extant which insists that matter has *of itself* an *inherent* power of *motion*, and that matter (or physical substance) is *eternal.* But that this assumption is untenable, is obvious from the following considerations: Motion in matter, as shown before, necessarily tends to bring matter into *forms;* and if motion was from eternity in eternal matter, then matter must from eternity have been brought into forms —nay, into the *ultimate* and *highest* forms which that motion is qualified to engender. But as it is sensibly certain that these highest forms did not exist forever, and rationally certain that they must have ultimately sprung from a state of primeval chaos, it follows, of necessity, that motion in matter could not have been from eternity.

Moreover, if motion is an inherent property of matter, that motion must be the result of a *force* adequate to produce it, and that force must be either *mechanical* or *chemical.* But that matter contains of itself, and in itself, no *mechanical* force, is self-evident. Conceive of any body of matter, whether an atom or a world, being in a state of perfect rest: it is evident that that body has within itself no mechanical force adequate to move *itself*, much less to act upon kindred bodies. It is clear, therefore, that matter has within itself, and originally of itself, no mechanical force adequate to produce motion in any case; and, therefore, if a body at rest is not acted upon by an extraneous moving force, it will necessarily remain, for aught *mechanical* forces can do, in precisely the same place, and will possess precisely the same bulk and constituents, to all eternity. This self-evident and generally recognized property of matter is called its *inertia.*

It is not denied that a *chemical* power—a power of expansion and condensation, or of altering the internal arrangements of particles—may be lodged in bodies of matter; *but this power is only the striving of particles for an equilibrium.* But unless there is a constantly active influence received from a *foreign* source, *the equilibrium must necessarily be finally attained,* and all action would then cease, never to be renewed by any inherent force, simply because such force is exhausted.

If we then consider the whole universal mass of physical substance, as the mass of particles supposed to be subject to this internal chemical action, that action, and its producing force, could not be eternal and unoriginated, because in that case it would manifestly, from eternity, have attained to an internal equilibrium, and all action would have ceased. These considerations show that even chemical action, and therefore chemical force, must have had a *beginning*, and therefore a *cause*, in some power or contriving agent *beyond* themselves, and outside of the matter in which they inhere.* But as there was no other realm of physical matter from which they could be supplied, we are driven to the only other alternative of supposing that they were supplied from a *Spiritual* Source—from the personal Realm of affection, intelligence, and volition, which we have before proved to be unoriginated, and hence *infinite.*

If this reasoning is correct, then the conclusion is obvious, that all motion of whatever kind, as well as the physical substance acted upon by it, must have had an ultimate origin in Spirit—IN GOD!

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* It may be added, that chemical forces, as inherent properties of original, amorphous, nebulous matter, must have been exceedingly weak, if in such matter such inherent forces could have existed at all, which is extremely doubtful.

CHAPTER VI.

PRINCIPLES OF UNIVERSAL SYNTHESIS

We have now completed our *descending* view of the realm of Being without us, and traced the material creation to its super-material—hence spiritual—hence *Divine*, Cause. The completion of this general *analysis* unfolds to us the true basis of all *synthesis;* and, keeping in view the Spirituality, Self-existence, and Divinity of the Original Cause, we may now proceed to inquire, what may be known, or legitimately believed, in relation to the origin, *modus operandi*, and government of Matter and Motion, and of all the subsequently established creations, systems, and kingdoms now comprised in the general fabric of outer Being?

I am aware, however, that many will be likely to consider questions of this nature as too far above the sphere of the human intellect, to justify an attempt even at the most *general* solution. But let us not be discouraged. It was intimated in the outset of the present treatise, that *nothing exists in the realm of being* WITHOUT *man, which has not an antitype and correspondent in the realm of being* WITHIN *him*, and that all which exists without, and all which exists within, *possess toward each other the relations of cognizable objects and principles, and cognizing faculties.* Besides, we have already found reason to believe that Law is unvarying; and if so, it may be traced in its operations, not only *inversely* from ultimates to origins of creation's unfoldings, but also *directly* from origins to ultimates. And as the wonderful powers of analogy have conducted us with apparent safety through the immense labyrinths of the stellar creations, in our efforts to trace them downward to their common source, we should not despair of deriving some substantial aid from the same mode of reasoning, when applied to the solution of those more profound and important questions which are embraced in a *synthetical* investigation of the system of Being.

As forming the basis of the process of investigation now to be pursued, we here lay it down, as a self-evident proposition, *that each and every effect is germinally contained in its cause, and hence, when developed, necessarily corresponds to its cause.* Were this not the case, neither cause nor effect could properly be called such, and there could be no conceivable sequential relation between the two.

For example, in the order of tangible developments by which man is surrounded, the Vegetable Kingdom precedes, and serves as the material source, of the Animal Kingdom. It therefore forms the *material* element of the cause of the Animal Kingdom, though a more essential element of the cause of this and all other creations, is of a *spiritual* character, supplied from a source that is *above* the particular creation to which it applies, as will be further illustrated hereafter. But the two kingdoms, sustaining toward each other, as they do, the relations of the material element of a cause, and the material element of an effect, stand, thus far, as mutual correspondents and exponents of each other. In like manner, the Vegetable Kingdom stands as a material correspondent and exponent of the Mineral Kingdom, which is *its* material source and cause, and contains the fundamental *principles* of its composition and physical properties, though in a *lower degree.* So the Mineral Kingdom, in like manner, has its physical correspondent in the mass of amorphous planetary matter which served as *its* source; and so, by like gradations, the chain of analogy carries our minds backward through planetary nebulæ, solar nebulæ, etc., until we come to the one great, universal, undivided mass of chaotic matter, which must necessarily have contained within itself, undeveloped, the material elements of stellar systems, solar systems, planets, minerals, vegetables, animals, and even the physical elements of the human constitution. Though indefinite in the extreme, this, in its occult properties and adaptations, must, as a universal material Germ, have involved the physical correspondences of all the creations which subsequently sprang from it, in the same way as the acorn involves the physical correspondences of the future oak; and by an intelligence capable of perceiving its interior properties and adaptations, it might have been *predicted*, in a general way, what kind of creations were destined to spring from it.

But as the Animal Kingdom, physically speaking, was previously contained in the Vegetable, and the Vegetable Kingdom was contained in the Mineral, and so on throughout the descending scale, so the great original, universal Kingdom of unformed matter, and whose undeveloped properties and principles were typical of all subsequent and subordinate Kingdoms, was itself as *one* Kingdom, previously involved in the infinite, eternal, and unoriginated Kingdom of Spirituality, which, as before shown, constitutes the DIVINE PERSONALITY. This Kingdom of Spirituality—in other words, the Divine Personal Being—comprises, therefore, not only the material (or substantial), but the spiritual and volitional, and hence the entire elements of the Cause of all things in universal creation; and hence the Creator and the created must stand as mutual exponents of each other.

That the great Kingdom of universal matter, and what, for the sake of perspicuity, we have called the great Kingdom of universal Spirit, stand in relations to each other similar to (though more comprehensive and perfect than) the relations subsisting between any two conjoined subordinate kingdoms in nature, is an idea which it is desired the reader should distinctly comprehend, as it lies at the foundation of all true, material, and spiritual philosophy, and will, as it is believed, tend to entirely reclaim science from the general tendency which it has long apparently had, to Pantheism and Atheism.

Considering that matter, *as such*, originated in the creative efforts of Spirit, and hence *Mind*, there is another point of view, from which it will appear that matter, both in its primeval state, and in all its subsequent states of mundane forms, must necessarily have been in exact correspondence with its Source and producing Cause. We know something of the nature and operations of Mind, by experience and consciousness. We know that the mind of the architect, for instance, constructs an edifice within itself, or within its own conceptions and thoughts—constructs it as an *invisible* and *spiritual* edifice—before proceeding to give it a physical form in the outer world. After the building is *physically* erected, therefore, it stands as a precise image and correspondent of its archetype or conception which first existed in the mind.

Applying these principles to the subject under present investigation, we may consider the Divine Thought as the Architect, and the universe, or any of its systematically organized stages of development, as the Edifice. Not only, then, must the archetype of the universe in its maturity, with all its harmonious worlds and systems, but even the archetypes of those atomic and infinitesimal forms constituting original chaotic matter, have distinctly pre-existed in the Divine, spiritual, and mental constitution.*

The Deity and the universe—the realm of Spirit and the realm of Matter—therefore, stand to each other in the relation of Archetype and Antitype—of Cause and Effect—and therefore the two, as before remarked, stand as mutual exponents of each other. In order, therefore, to arrive at some general conclusions in reference to the constitution and principles of creation as a whole, and also in respect to the constitution and principles of its included and correspondent sub-systems, let us first briefly interrogate Reason and Intuition in reference to some such general facts as we can comprehend, respecting the constitution of the Divine Being.

The only way in which we can obtain any definite and proper conception of the Divine Being, is by first conceiving of a true and undegenerated *human* being—such being the culminating point of all Divine creations, and hence the embodied representative of all the Divine affections. Although it is not the intention to base the propositions of this work on the authority of inspired writings (whatever *confirmations* of such writings may be *incidentally* developed in the course of our *philosophical* investigations), we can not, in this place, avoid noticing the biblical declaration that "God created man in his own image," as impliedly sanctioning an endeavor on our part to understand all that we may comprehend of God, by a comparison of the knowledge we have of man. Spirit, indeed, is essentially of the same nature wherever found, whether existing in a finite or an infinite degree, though it is acknowledged that it may exist in different shades of moral character as resulting from different combinations, developments, and directions of the faculties. Conceive, then, of a *perfectly* constituted man—a man whose physical, intellectual, and moral natures are in harmonious development, and then conceive this man to be expanded to *infinitude*, and you have the truest and highest conception of God of which the human mind is capable.

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* The idea of *Archetypes*, as here presented, was originally conceived by Plato, and formed a prominent feature of his philosophy; though the author here derives it from sources independent of Plato's teachings.

But it would be diverting the reader too far from the object of this portion of our treatise, to enter at present into an elaborate discussion of the question, What is man? This question shall be discussed at length in the second part of this work. But for the present we must confine ourselves to a few propositions which, to intelligent minds, will appear more or less self-evident, and of the truth of which, as well as of the ulterior positions which they will serve to illustrate, confirmation will accumulate as we proceed, until any reasonable doubts with which some minds may at first regard them, will, it is believed, be either greatly diminished or entirely dissipated.

Let it be apprehended, then, that the *most general* constituents of human personality, are three; viz., 1. Soul, or interior vitality, which is the seat of the affections; 2. Spirit, or the organized, pervading nerve-element, which, in its lower degrees, is the vehicle of sensation, and in its higher degrees, is the seat of the understanding; and 3. Body, or vehicle of outer manifestation and action.

Precisely corresponding to these are the three most comprehensive constituents of the *Divine* Being; viz., 1. Interior Soul, Life, or *Love*; 2. Spirit or Wisdom; 3. Outer sphere or vehicle of operative Energy, the latter corresponding to the *body* in *man.*

But the constituents, both of the human and Divine personality, considered in more detailed reference to elements, forms, and outer objectivities, are also, in each case, susceptible of a *seven-fold* division, which may be briefly stated as follows: 1. Subjective Love, or Love as an abstract quality of the personal essence; 2. Subjective Wisdom, or Wisdom as an abstract quality of the personal essence; 3. Subjective volition, or volition as an abstract power of the two previous elements combined, and a procedure from them both; 4. The essences having the properties of Love, Wisdom, and Volition, embodied in *personal organism;* 5. Objective Love, or Love as related to outer forms; 6. Objective Wisdom, or Wisdom as related to outer forms; 7. Habitation, or a complete system of outer objects and conditions related to the whole personal nature and desires, and in which such nature and desires become embodied and represented.

In man the elements of this seven-fold classification contain within themselves many corresponding sub-divisions, some of which are much more obvious than the foregoing general divisions, as will be seen when, in the course of our inquiries respecting the MICROCOSM or the universe within, it comes in order to discuss them. In God the elements of this seven-fold division may be presumed to contain an *infinite* number of sub-divisions, all of which are, in like manner, susceptible of corresponding seven-fold classifications; and their co-relations and inter-communications may be supposed to constitute the infinite harmonies and beatitudes of the Divine soul! Our object at this stage of our treatise, however, is little more than to unfold the *idea* of these classifications as a basis on which the great plan-work of creation may be conceived, leaving such evidences of their truthfulness as exist in the nature of things to be incidentally developed as we proceed.

This seven-fold classification of the principles of the Divine constitution, is probably what the inspired seer St. John had reference to when he spoke of the "seven Spirits of God which go out into all the earth." And it was undoubtedly the outgoings and efficient operations of these which produced the various seven-fold Divine antitypes which were shown to the same inspired seer under the forms of the seven churches of Asia Minor; the Lamb with seven horns and seven eyes; the book with seven seals, and their successive openings at seven different epochs; the seven angels with seven trumpets; the seven thunders; the seven last plagues, etc.*

If it be true, then, that there are these seven natural divisions in the constituents of the one Divine Being, it is obvious that any system of creation or operation which presents a complete reflex of what is contained in the Divine Source from which it sprang, must contain a representation and outer expression of *each one* of these Divine constituents, and must therefore, as a whole, be also *seven-fold.*

But we have seen that Nature, as a Whole, is divided into many Systems, Kingdoms, or more properly speaking, *Discreet Degrees*, rising one above another. *Each one* of these Kingdoms or Degrees (as will gradually be illustrated in what follows) contains within itself the seven-fold series of parts, as the natural evolution, and reproduction, on a higher scale, of the seven-fold series of the Degree or Kingdom immediately below it in the order of development; and all of these, separately and collectively, are evolutions from, and correspondents of, the Divine seven-fold Constitution, which is the Originator and Cause of all. Each one of these seven-fold series, moreover, corresponds to the diatonic scale in music, and which, with its seven constituent notes, is therefore its natural oral interpreter and exponent. Thus the various Degrees or Kingdoms of natural developments, may be considered as *octaves*, rising one above another, the same as the octaves in music. *Each octave exactly corresponds to, and harmonizes, note by note, with all other octaves, whether they be on a higher or lower scale; so that if we fully understand any octave, Degree, or Kingdom of natural development, we have in it a measure and exponent of all others.* Thus the system of nature, as a Whole, may be considered as one grand Musical Organ, compassing all these octaves, and which, in the hands of the Great Organist, the Divine Being, in whose infinite series of octaves of Love and Wisdom, exists the very soul and origin of *all* harmony, is capable of sending forth every where those silent notes of harmony and music which have been perceived and deeply felt, by every truly elevated and interiorly developed human soul!

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* The number *seven* appears to have been anciently recognized as a general number of *completeness*, and as such it appears to have been habitually employed by the sacred writers. Thus, in their classifications, there were seven days (or periods) of creation; seven days of the week; seven years from one sabbatic year to another; seven times seven years from one jubilee to another, etc., (see by the aid of the concordance, the numerous instances in which the number seven occurs in the Old and New Testaments). Some of the ancient heathen nations, also, adopted the seven-fold classification as of extensive application, especially to spiritual and Divine things; and it was introduced by Pythagoras from India into Greece.

The idea of the "music of the spheres," therefore, is not merely a poetic fancy, but a sublime reality, whose basis and origin are exhibited in the foregoing simple principles.

That this harmonial scale of creation, as corresponding to the harmonial scale of degrees of Love and Wisdom of the Divine Mind, is not a mere fanciful conception, will become more and more obvious as we proceed. It will be shown that not only does each one of these degrees or octaves of creation, by its correspondence with all others, serve as their natural exponent, but that each octave, if its constituents are correctly classified, rests upon internal evidence of its own. And if this serial order of graduated progression is duly recognized, and its laws are properly understood, we may use any seven-fold classification, *known* to be correct, in correcting the errors of others, just as the musician would correct the discords of one octave by the harmonies of another.

But before proceeding further, we must speak briefly of the *laws* which, as we proceed, will be seen to govern the septinary classifications, and by which it may be generally known whether any classification is correct. In each correct classification, the members, in their numerical order, may, in *general terms*, be distinguished as follows:

Number One is the number of *simple* unity.

Two is the number of *productive* unity, and in general terms comprises positive and negative, active and passive, or male and female, principles.

Three is the number of *self-sustaining* unity.

Four is the number of *Organization.*

Five is the number of *exterior* completeness. There being five *exterior* properties to outer things, man, hence, has five *exterior* senses, whose object is to give information of them to the interior soul. As the five *exterior* properties also exist, with *express reference* to two *interior* and *higher* properties, the number five is also a number of *aspiration*, as will be better understood hereafter.

Six is the number of subordinal association, and of harmonial, peripheral revolution, as around a governing center.

Seven is the number of final completeness, embracing both exteriors and interiors. Hence it is the pivotal and governing number of the series.*

This septinary classification may also be embodied in the *triad*. Thus the first, second, and third members of any seven-fold series, form one trinity, and therefore may count as a unit; the fourth, fifth, and sixth members form a second trinity, and count another unit; while the *seventh* member, which is always equal, or rather superior, to all the rest put together, forms a third unit, and completes a *general* trinity. As a guide to correctness in any septinary classification, it is important to observe that the first and second trinities in the series, should bear a certain general and particular *correspondence* with each other.

Whatever obscurities may at first exist in the foregoing statement, will be abundantly clarified by the illustrative examples which will incidentally occur as we proceed. It is here given mainly as a hint to the reader, that the classifications in which we shall have to deal, are not *arbitrary*, but founded in the nature of things. Considering, therefore, that each natural seven-fold series corresponds to, and illustrates every other, and that this septinary arrangement runs through every complete creation, system, and Kingdom in nature, the degree of reliance which may be placed on the legitimate results of the method of investigation now proposed, as well as the character and extent of those results, as compared with what may be obtained by other processes, may be illustrated as follows: Suppose there are a large number of timbers, hewn, squared, morticed, etc., and piled confusedly together.

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* The ancient inspired records also deal largely in the number *twelve* and its multiples, as an interiorly significant number. It may be remarked that the number twelve is evolved from the seven-fold series, and is simply the number of six productive unities, or positive and negative, active and passive, or male and female, principles. It is therefore, also, a number of subordinal association.

The superficial observer, uninstructed in the synthetical principles of architecture, may take most accurate measurements of each of those timbers, and may give most correct descriptions of their shapes, abstract qualities, etc., just as science, as ordinarily pursued, gives accurate descriptions of abstract facts which constitute the timbers of the great temple of Nature. Such an observer, however, may not be able to discover any intended *connection* between many of those timbers; may be able to form little or no idea of the form, proportions, or correlative parts of the building which they would constitute, if all put together, and may even doubt that they were ever all intended to go together in any definite form; and that science which merely *analyzes*, but does not *synthesize*, experiences much the same difficulty in viewing the timbers of the temple of Nature. But suppose, now, that a skillful architect comes on the ground: he views those apparently heterogeneous timbers, not only analytically (or in isolated detail), but also synthetically, or in their relations to each other; and, by the observance of simple rules, he proceeds—without any paring or forcing—perhaps without even the "noise of the hammer"—to erect a magnificent and glorious temple, in which there is a place for every timber, from greatest to smallest, and a timber for every place which requires one. Then even the previous superficial and merely *analytical* observer of the timbers will *know*, if he surveys the edifice, that those timbers were intended to go together precisely in the relations in which he now finds them; and that the rule or theory by which they are brought together, is *true*.

Suppose the observer noticed, however, that in the erection of the building, some of the timbers were a little pared, or forced, or warped, in order to make them join with others: still, if the building, when erected, exhibits unmistakable indications of order, and symmetry, and harmony of its numerous parts, it stands as evidence of *general* truthfulness of the architectural rules by which it was erected; and, if it is then known that the hewer of those timbers was *absolutely perfect* in his art, the inference would be legitimate, that the paring and distortion used in putting them together, were owing to the ignorance or unskillfulness on the part of the builder, by which a joist or a post was occasionally inverted, or made to take the intended place of another of somewhat similar form.

Now, all natural facts (which, it must be confessed, the science and philosophy of the day view in an aspect *somewhat* heterogeneous) are *timbers* of the great temple of Nature. If we can find a method of classification, therefore, by which these various facts, as timbers, may be, without any warping or forcing, brought into the form of one grand system, among the myriads of the complicated parts of which there may be observed a mutual dependence and harmony so perfect, that the loss of a single part would sensibly mar the symmetry of the whole; then we may be assured that this method is the *true* one, and that the structure erected by it is a structure of truth. *Now, a system of classification of this kind must exist somewhere in nature, if it be admitted that nature is not, after all, a more or less heterogeneous and disconnected mass.* If the reader can not believe, with me, that the doctrine of the seven-fold series and its natural adjuncts, as herein briefly unfolded, constitutes that system, it is confidently believed that he will at least find it immensely suggestive, compelling nature, in many instances, to tell her own story, and to give up secrets which science and philosophy have hitherto been inadequate to wrest from her grasp. For the several years which have elapsed since I was so fortunate as to be led to the discovery of this method of correspondential reasoning, I have pursued it with results which, to my own mind, at least, have been intensely satisfactory; and, I confess, that without its aid I could not have had any conceptions which might have been regarded even as an approximation to a solution of many of the questions discussed in this work.

CHAPTER VII.

THE SEVEN FUNDAMENTAL LAWS, AND THEIR INTIMATIONS RESPECTING THE ORIGIN AND STRUCTURE OF THE UNIVERSE.

Deeming the foregoing a sufficient exposition of the principles which shall guide us in our further inquiries, we now proceed to our proposed *synthetical* investigation of the system of being without us. Pursuing the natural order of progression, from fundamentals and generals to ultimates and particulars, we will first institute some comprehensive inquiries respecting the origin, structure, government, etc., of the physical universe as a whole; and afterward, similar inquiries shall be pursued in relation to the Solar System, the planet on which we dwell, and the various systems of inanimate and animate creation which exist upon its surface, of which the ultimate and highest is the human organization.

And, in view of the new method of reasoning which we have unfolded, let it be borne in mind that if the origin, constitution, laws, functional operations, etc., of *any one* of the systematic creations proposed for investigation, can be elucidated directly and more clearly than any other, it will serve as a correspondential guide to the further elucidation of all the others. Thus, with a proper classification of the corresponding series and degrees of nature's unfoldings and operations, the known will cast the whole light of its analogies upon the unknown—just as each timber of a temple hints the shape and nature of the timbers with which it is to be conjoined, and thus serves as a guide to the erection of the edifice; or, as a single fossil bone of an extinct and previously unknown animal, enables the comparative anatomist to describe with accuracy, the animal as it lived and moved upon the earth in its organic completeness. Our method, if successfully pursued, will, moreover, develop the unity of principle pervading, in different degrees, all creations, from lowest to highest—the unity and harmony, therefore, of the one and only system of universal truth; and, as we pursue the revelations of the physical universe, from its rudiments to its higher unfoldings, our thoughts, from the accumulating analogies, will gain such an upward impetus as may hereafter carry them directly through the line of those higher and corresponding truths, which relate to man physiologically, psychologically, spiritually—socially, politically, and religiously.

With respect to the origin, structure, laws, etc., of the universal cosmical system, we commence our reasonings with a postulate which, whether strictly true or not, can not lead us into important error in our subsequent deductions, since we have so many correctives of inharmony, as involved in the general series of corresponding and harmonious octaves of developments through which the path of our investigations will lead us. The postulate is, That God, from the promptings of his own interior soul, which is Love, under the direction of his Wisdom, which gave order and form to the operations of Love, formed from the most exterior, or, if the expression may be allowed, the least Divine and most nearly physical, portion of his own personal emanations, as many degrees, varieties, or perhaps classes of atomic particles, as corresponded to the general seven-fold harmonies of his own Infinite nature. The supposition that the varieties of these primitive atoms are, in number, just seven, or a multiple of seven, is admitted to be purely *a priori*, but is a legitimate deduction from principles before established: it is here offered as an introduction to propositions more certain, and from which it, in its turn, will receive confirmation; though, if it could be proved to be untrue, it would not essentially affect our main argument. These varieties of atoms, then (*whatever* their number may have been), may be supposed to have constituted Matter in its primitive state, which probably was characterized by none of the distinctive properties of oxygen, hydrogen, nitrogen, calcium, potassium, or any others of the so-called "elements" known to chemistry. In being evolved, in particleized form, from the emanated personal Essence of the Divine Being, the substance thus particleized ceased to constitute any necessary portion of the Divine Person, and formed a Realm or degree of Being by itself, but still a Realm of Being *corresponding to*, *immediately connected with*, *and capable of receiving direct influx of vital energy from*, *the great Personal Realm of Spirit from which it proceeded.* This vital influx, however, may be supposed to have been altogether *optional* on the part of the great Generative Spirit, even as was the evolution and particleization of essence itself; and, without the direct communication to it, of an impelling energy from the Divine source of all energy, matter, thus constituted, would, as before shown, have forever remained inert.

We are next, therefore to inquire into the origin and laws of MOTION in this primeval chaotic mass.

Admitting, what was before proved, that *inertia* is an inseparable property of matter left solely to *itself*, it is self-evident that *Motion* could have been the product only of a *Force* adequate to overcome the tendency of matter to remain fixed. Though force is essentially of the same general nature in whatsoever direction it may act, there are several modifications of the dynamic agents in which force originates. These, requiring, as they do, a separate chapter for their proper elucidation, shall only receive such allusions in this place as will be necessary to the explication of the *laws* by which force acts in producing motion, aggregation, segregation, reciprocal transference, and structural stability.

It has before been repeatedly remarked, that the universe without corresponds to the universe within man, and that therefore all principles and developments of the outer universe may be conceived of by the fully unfolded human faculties. This is because man is, physically and spiritually, an *epitome* of all previous Divine unfoldings, and therefore is a *microcosm* or little universe of himself. Though it is proposed to consider the discreet degrees of creation in their natural order of unfolding, tracing each octave as it passes upward and merges into a higher and corresponding one, until the whole merge (loosely speaking) into man; yet, for the purpose of illustrating the forces and laws of the physical universe by the same forces and laws which, in an ultimately sublimated degree, apply to man, we will here so far anticipate the appropriate subject of the second part of this work, as to exhibit the following self-evident truths respecting the human economy.

In man (the microcosm or little universe) there is, 1. Passion or Love, which corresponds to *Heat;* 2. Intelligence or Wisdom, which corresponds to light; 3. Nerve-essence, which corresponds to electricity (these three forming a *trinity*); 4. The agent which attracts circulating particles, and deposits them in the solid portions of the organism; 5. The agent which removes particles from lower tissues, and deposits them in higher; 6. The agent which acts and re-acts sympathetically between one organ and another (these three forming a second and corresponding trinity of dynamic agents); and, 7. The interior, unitizing, and vital agent, which pervades and governs all the preceding.

Accompanying, and precisely answering to, these seven dynamic agents in man, are *seven laws*, or *modes*, by which the former operate. These are, 1. *Expansion*, governing all diastolic movements; 2. *Contraction*, governing all systolic movements; 3. *Circulation*, governing all rudimentally reciprocating movements (first trinity); 4. *Aggregation*, governing all depositing and organizing operations; 5. *Segregation*, governing all ascending movements; 6. The law governing all *sympathetic* movements (second trinity); 7. The law of all vital, unitizing, and governing operations, the vital and spiritual constitution as a whole being here the mover.

Now, in the macracosm, or great universe, we have, 1. Heat, which corresponds to Passion or Love; 2. Light, which corresponds to Intelligence or Wisdom; and 3. Electricity, which corresponds to nerve-essence, in the *little* universe—these forming a fundamental trinity of dynamic agents as operative in outer nature. There is also a second and corresponding trinity of dynamic agents in nature, and also a seventh and vitalizing agent, as corresponding to the same in man; but these important agents shall be illustrated hereafter. Assuming their existence for the present, however, we may remark, that, corresponding to these seven dynamic agents, there are also *seven laws* which govern the outer universe, and all its correspondent sub-creations, whether in the animate or inanimate departments of being. These laws, indeed, are the same throughout with those which we have seen to apply to man, though in lower creations they exist in lower degrees of development. They may be exhibited, with their ternary relations, in the following table:

PRIMARY TRINITY.

1. Expansion.
2. Contraction or Attraction.
3. Circulation.

SECONDARY TRINITY.

4. Aggregation.
5. Segregation.
6. Sympathetic reciprocation.

7. Vital complex unity

Here, it will be perceived, is a regularly graduated progression in the order of elements, ascending from first to last, as it were, through the different stratifications of one complete system. They maintain relations to each other similar to the relations of the different parts of a tree; viz., the first is the root of the series; the second is the trunk; the third is the branches; the fourth the leaves, and the completion of the organic form of the tree (wherefore, No 4. in any seven-fold series always corresponds to aggregation, organization, or association); No. 5 commences the segregative or reproductive process, and corresponds to the flower buds; No. 6 corresponds to the flowers, and No. 7 always corresponds to the fruit, embodying in itself the sublimated elements of the whole tree, together with the seed or germ of a future and corresponding creation.

The first trinity in the series approximately corresponds to the second, but the correspondence is rather by way of counterpart, or *antithesis*, than in any other way which may be easily defined; and in the general trinity, comprehending the whole septinity, may be observed a *general* correspondence with the sub-trinities.*

These, let it be borne in mind, are claimed simply as the *fundamental* and *all-comprehensive* laws of natural and moral existence, saying nothing of those numerous *sub*-modes of operation, commonly called laws, which grow out of them. The essential principles of these general laws, in their simple and combined states, and in their various degrees of sublimation and ascension, as applicable to the different degrees of creation, will, we apprehend, be found to involve a sufficient explanation of every mode in which original Divine Force operates in the production of the various phenomena of creation.

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* These *general principles* of classification, not only in respect to dynamic agents and laws, but their corresponding forms and developments, are applicable to all natural series or octaves, and by duly comprehending and observing them, with the peculiar and relative characteristics of their parts, we may be able always to distinguish true from false classifications

Considering, then, that the primeval chaotic materials, out of which the universe was formed, did not originally, and of themselves, possess any force or motion, we proceed, in the light of the foregoing principles, to inquire more particularly Whence, and how, originated the forces, laws, and motions from whose diversified operations has resulted the stupendous system of being by which we are surrounded, and of which we are a part?—and what was the order of progressive development, and what is the general structural form of the cosmical universe, which must have legitimately resulted from these causes? And, as it has been before shown that all the *principles* that are involved in the *infinite*, may be epitomized in the *infinitesimal*, we may, for the sake of convenience, and without injury to the argument, reduce the subject of our contemplations to an imaginary scale of magnitude which may easily be conceived by the human mind, and which will allow of all progressive operations being surveyed as from a single stand-point.

The influence which may most naturally be conceived to have first acted upon primordial matter to impel it to ascending developments, was Divine Love. Now, Divine Love corresponds to *Heat*—is, indeed, spiritual heat itself, and thus is the first *expansive* impulse of mind. It is so in man, as well as in the Deity; and its correspondence with physical heat is instinctively recognized by the human mind, and is implied in the phraseology with which men naturally speak of it. Thus we speak of one in whom the love or passional principle predominates, as a "*warm*-hearted man," as an "*ardent* enthusiast," or as a man of "*fiery* disposition." On the principle, therefore, that all bodies are developments from an interior soul, and all natural phenomena have an ultimate spiritual origin, we may conceive that while the great Kingdom of Matter was in such immediate relation and juxtaposition to the great Kingdom of Spirit, its Cause, Divine Love (or Divine Spiritual Heat) flowed directly into the Realm of Matter, and especially into its seventh or highest and proximately vital degree as being most in affinity with the Divine Spirit itself, and that the effect of this influx was an immediate generation of a corresponding *natural* heat.* This heat must necessarily have been attended by an immediate *expansion* of the recipient particle or collection of particles, and by the evolution of a magnetic or *magnetoid* atmosphere partaking of the nature of the particle's interior vitality. Divine Wisdom (or spiritual light) entering with, and acting through, the Love, pervades this atmosphere, and brings it into the nature of *physical* light, to which wisdom corresponds.†

The expansion resulting from the heat must necessarily have produced a comparative vacuum—that is, a vacuum in respect to those essences which were subjected to the expansion, and therefore produced a tendency to an absorption or rushing in of corresponding essences composing neighboring particles, and which had not yet, in the same degree, been acted upon by the expansive force. Moreover, the active light-sphere (or Wisdom-principle) which is an orderly procedure from Heat, (or Love), or accompaniment of, and the administrator to, its wants, formed a recognizing and sympathetic connection between the particle first acted upon and the particle immediately conterminous; and by an envelopment of the relatively passive particle in the light-sphere of the relatively active one, the former would become assimilated to the latter, and, floating to it through the circulating currents of the enveloping light-sphere, in the same way that the particle of iron floats to the magnet through currents of the magnetic essence, it would become incorporated with it as a part of the same body. Thus, as each particle is made the recipient of the essence of Divine Love, it lovingly opens its heart, and extends its ethereal arms to receive and embrace its brother, and the two thus become one. And being thus united, and becoming recipients for a further influx of heat, the same operation that before took place, is now repeated on a little larger scale, and more particles are attracted. And so the process continues to be repeated, until the minute nucleus of a CENTRAL SUN is fully established, which, by a continuation of the same process of unfolding, goes on to complete development, forming the whole universal mass of physical substance into one coherent and undivided Body, dense in the center, and gradually shading off into extreme levity toward the circumference.

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* That *natural* heat may be produced by what we have here termed *spiritual* heat, is shown by the fact, that when passion flows from the interior soul into the nervous tissues of the human body, it raises the general temperature of the body, quickens the circulations, produces a flush of the countenance, and a burning of the cheeks, and, in general, greatly increases the physical powers. It may be remarked, that the general principles of this portion of our theory were taught by the celebrated Swedenborg, though we have arrived at them by an independent process of induction.

† It is well known that natural light consists of *seven* prismatic rays; and this fact hints at the corresponding *seven-fold* nature of Divine Wisdom, and hence, also, of Divine Love, its inseparable associate.

If, instead of supposing this operation to commence in in finitesimal particles, we suppose it to commence in a few cubic feet, or in hundreds, or thousands, or millions of cubic miles of central matter, or if we suppose (what is probably more nearly the truth) that all particles in the universal mass were simultaneously vitalized, *but in different degrees*, by the influx of Divine spiritual heat, and that each commenced forthwith, a tendency toward particles more vitalized than themselves, and all a tendency toward the particle *most* vitalized, the *principle* involved will be the same, and the ultimate result of the operation will be the same.

If the foregoing theory of the initial steps of the creative process is true, it not only affords us an example of the incipient operations, but an illustration of the very *cause* of gravitation, of which latter I believe no adequate explanation has yet been afforded by any of the common philosophies of the day. There are, however, in subsequent stages of the creative unfolding, higher elements and forces which enter into, modify, and render more definite, the phenomenon of gravitation, as will be seen.

The manner in which two streams of particles flowing from *opposite directions* toward a common center, tend to produce a *rotatory motion* in any collection of central particles, has been explained by those who have written on the nebular theory of the origin of worlds and their motions.* The idea may be apprehended from the following illustration: Suppose that two balls of equal weight, are rolled with equal velocity, over the floor from opposite sides of a room, and that they at the same instant impinge upon a third ball lying at rest in the center of the floor. If the two strike the ball at rest in a line exactly cutting its center, no motion will be generated in the latter ball. But there are a great many chances against both balls striking in such a line, and if we suppose a *constant stream* of balls (corresponding to particles) flowing inward toward the central ball, the probability of the latter being soon struck a little out of the line of its center, would amount to an almost absolute certainty. In case this should happen, a rotary motion of the central body would necessarily take place as a result of the *momentum* of the body or bodies impinging upon it, especially if the latter bodies, as a result of magnetic or other attraction, attach themselves permanently to the surface of the former while still under the influence of this momentum.

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* See particularly Nichol's "Architecture of the Heavens."

Suppose, then, there is a constant stream of bodies flowing inward from all directions toward the central body, as is supposed to be the case with particles of nebulous matter flowing inward toward a common center; the rotation of the central mass itself when once established, will, by the friction of its revolving atmosphere, if from no other cause, be sufficient to throw the approaching end of every radial line of gravitating particles out in the *same direction* from its center, and thus the momentum of every impinging particle will add to the tendency to central rotation. As the particles gradually establish relations with each other, through their various degrees of attenuation from center to circumference, rotation will gradually be established throughout the whole mass, the motion being relatively swift at the center, and gradually growing slower at every remove toward the circumference, where it is the slowest.

The idea has been illustrated by a reference to the effect produced by different currents of water flowing toward a common center, which effect is well known to be that of a *whirl*, rapid at the point of meeting, and growing more tardy at every remove from said point, until it dies upon the shore, or is lost in the general motion of the stream.

If we have in these principles, as we appear to have, a sufficient account for the origin of all rotatory motion in the celestial spaces, it were certainly unphilosophical to look for its origin in any foreign or arbitrary impulse.

All the phenomena we have thus far considered, therefore, may be traced to the operations of two laws, viz., Expansion and Attraction—the first being based upon Heat, and the second upon Heat and Light combined—which elements, again, owe their origin to the corresponding principles of Divine Love and Wisdom, or *spiritual* Heat and Light. We come now to consider the operations and results of a third law—the law of *Circulation.*

While men of science have minutely traced the operations and phenomena of *gravitation*, they have taken comparatively little cognizance of any *reactive* force from the attracting body. Yet, without the aid of a reactive or emanative force, to counterbalance, in some measure, the gravitative power, it would be impossible to conceive, on rational principles, of the formation of any other body than the first and universal Body, which would selfishly absorb all materials, and give forth none. But it would only be in accordance with universal analogy, to suppose that while this constant *secretion* was going on, there was also as constantly kept up a countervailing process of *excretion.* Particles absorbed into the central mass (or, what is the same thing, the denser portion of the whole united mass), would, by the action of its superior vitality, undergo a *quasi* process of digestion, and portions of their essence would become refined and sublimated, and would be sent off again into space, to the *opposite* materials of which they would in their turn be *attracted*, in the same way as positive and negative electricities are mutually attracted. As *all* gravitating particles can not go absolutely to the center (some being crowded out by others), and all emanated particles can not, for a similar reason, recede to the circumference, so each finds an equilibrium, and takes a position, between center and circumference, according to its specific density or levity. And now, a similar process of digestion necessarily goes on among gravitating and emanating particles which find their common equilibrium at any given distance from the center, and by their mutual action and reaction, another change and excretion takes place, and the rejected particles, being in a state exactly opposite to that of the particles thrown off from the great Center, now gravitate again toward that Center, there to experience and produce still further changes. Thus there is a constant action and reaction, flux and reflux, between center and circumference, and between all intermediate parts of the great mass; and the law governing this reciprocating movement is what we mean by the law of *Circulation.* It corresponds to circulation, or to the flux and reflux of venous and arterial blood to and from the heart in the little universe, or the human system, even as the laws of *Expansion* and *Attraction* (or contraction), before considered, correspond respectively to the diastolic and systolic motions of the heart, lungs, and perhaps the minute vesicles, or "corcula," of the brain. Being the third law of the universe, it corresponds to the third element of the Divine essential Constitution, which is the Divine Sphere of operative Energy, which, again, corresponds to the nerve-essence in man, and which latter corresponds to Electricity in the universe—this being actually the agent mainly concerned in the production of the phenomenon now under special consideration.

The laws of Expansion, Contraction, and Circulation, therefore, form a *trinity*, as dependent upon the triune elements of Heat, Light, and Electricity; and which latter are related to the corresponding three-fold Divine spiritual elements of Love, Wisdom, and Vehicle of operative Energy.

The *Fourth* law, is a law of *Organization*, and brings the elements and motions previously developed, into a state of systematic and serial *Aggregation.*

Before rotatory motion is fully established in the mass of matter, the gravitating and emanating particles would proceed *toward*, and *from*, the center, in nearly *straight* lines. But after said motion is fully established, and becomes general throughout the mass, both kinds of particles would proceed in aberrent or *curved* lines, the curves corresponding to the direction of motion in the revolving matter—in the same manner in which a person attempting to row a boat in the direction of a radius of a circle or vortex of water flowing round a center, would, if he kept the side of his boat always square to the stream, be carried out of a direct line a distance proportioned to the rapidity of the current, and would thus describe a *curved* path.

But it is evident, for reasons already intimated, that neither can *all* the gravitating particles take, at any one time, a position *entirely* at the *center*, nor can all the emanating particles take a simultaneous position *entirely* at the circumference, but that each will assume a position with reference to the two extremes, where it finds an equilibrium, and will keep this position until a change fits it for another. Suppose, then, that a gravitating and emanating particle are in exactly opposite states to each other in respect to their degrees of *positiveness* or *negativeness:* it is evident that both particles would find a common equilibrium only at the same distance and position between the center and circumference. They would there meet, and by virtue of their elective affinities, form a union as male and female particles, and would assume a *circular* or *orbitual* motion, coincident with the rotating motion of the general mass, *which* MOTION *the united momenta of their previously gravitative and emanative movements would tend to sustain.*

Now, supposing that there were originally just seven kinds or classes of atomic particles (no matter into how many more kinds or classes these were susceptible of being subdivided), it is easy to perceive that the foregoing principles would probably involve something like the following results: one class of atoms, rejecting the immediate companionship of all others, would cluster around a central point, and form a sun. Each of the other six classes of atoms, in like manner, rejecting the immediate companionship of other atoms, while obeying the impulses of its internal and strongest affinities, would assume a general distance from the center determined by its specific point of equilibrium, and there, contracting upon itself, would form a mass of its own, in the general shape of a *ring*, surrounding the interior solar mass. Here we have a law of *deposition* and *aggregation*, corresponding to the law by which particles, circulating in the human blood, are deposited and aggregated in the form of muscle, cellular tissues, etc.

The universal system, as thus definitely organized, would, therefore, supposing that there are seven general varieties of matter, present the form of six concentric rings of nebulous matter, surrounding the seventh formation, which is the central sun. But if there were a greater or less number of kinds of matter, there would be a correspondingly greater or less number of rings, but all constructed on the same principle. Of this annular structure we have a general analogue, though on a small scale, in the rings of the planet Saturn, and also on a larger scale, in the annular nebulæ, of which there are a few examples in the heavens.

It should be added, however, that the idea of this concentric annular form of structure can only hold when associated with the supposition, that the primitive point of general gravitation was at, or near, the *center* of the chaotic mass. If the gravitative point was far out of the center, then the evolved masses, instead of assuming the forms of *circles*, would assume the form of *ellipses*, having a preponderance of their materials on one side of the sun, where, indeed, the *whole* might be subsequently drawn by the superior gravitating force of their major quantity, and form a separate revolving mass. In either case, however, the fundamental *principles* involved would be the same. But of the general prevalence of the annular, or, at least, elliptical form of structure, in the sidereal realms, there is a sufficiency of ocular proof, as incidentally exhibited in a previous chapter.

The FIFTH law, governing a corresponding fifth development, is the law of SEGREGATION, by which the materials of the previous annular formations, obeying *higher* and more *specific* elective affinities, separate into different masses, of *higher and lower degrees of refinement.*

The nature and *modus operandi* of this law, may be understood by the following considerations: The completion of the last or circular formation, brings the materials of the universe to a *triune degree* above their primeval or chaotic state. Of course, therefore, not only the essences, but the activities and inter-activities of the whole structure, are more refined, diversified, and systematic. Each nebulous ring is now itself a comparatively independent theater of molecular force and motion, and all of them act upon each other by their gravitative and emanative forces, while the central sun, as the great heart of the system, continues to send forth his vivifying and generative influence to all.

It is easy to conceive that the annular masses, being not only internally active, but penetrated in various directions by the refracted emanations from the central sun, would be liable to be rarefied at particular points and condensed at others, and thus to be shrunken and cleft apart, at particular lines and angles, and that by inherent action of the particles of the rings themselves, contraction would take place from these lines of cleavage, and that the materials previously united, would thus be segregated into separate masses. These masses would, on the same principle, be liable to be subdivided into inferior masses of greater or less number, in proportion to their respective original magnitudes. This whole process of segregation or fragmentation, is *faintly* illustrated by the breaking up of the clouds after a storm, and their resolution into separate masses.

According to principles before explained, each general mass, owing to its particles gravitating to a common center within itself, would assume a general rotatory motion which, for reasons which mathematicians will readily conceive, would necessarily conform in its direction to the revolution of the great ring of mundane materials to which it belonged, and each sub-mass would have a particular rotating motion of its own, which would conform to the motion of the general mass to which *it* belonged, *i. e.*, supposing that there were not in either case any *particular* or *incidental* causes of disturbance. Thus general masses and their included *sub*-masses, with their general and particular centers of gravitation and revolution, would, by further progression, form general stellar systems, and their included sub-systems, and finally, also, systems of planets and satellites, all of which latter would be evolved by the progressive unfoldings of the same principles heretofore explained as governing the formation of the *universal* structure.

In this way, therefore, as may be rationally supposed, originated all the nebulæ, clusters, stellar systems, or firmaments, which the telescope has revealed, together with untold millions of others of like nature, which lie forever concealed from mortal vision! In other words, each one of these originated from a fragment of the periphery of a great wheel or circle of nebulous materials, surrounding the great Center of all centers.

This hypothesis, relative to the origin of the stellar clusters, is not without strong confirmatory evidence in celestial appearances. I have suggested that the vivifying emanations from the central sun, acting upon the angular masses of nebulous matter, would produce planes of rarefaction and cleavage in various directions, from which planes each resultant insulated mass, as also each of its subordinate and included masses, would contract upon its own center. It is evident, therefore, that each general mass, with its included sub-masses, would first be of an *angular* form—on the same principle on which any cooling and contracting substance tends to separate into angular masses, and as is sometimes exemplified in the cleavages of igneous rocks. But, by the force of internal gravity, and the rotatory motion which, according to principles before explained, would naturally result therefrom, these nebulous masses would all tend, as they progressed, to assume the *elliptical* or *spherical* form. Now, this is precisely what is observed in relation to the nebulous and stellar masses of space. Some are of exceedingly irregular form, having long and sharp projections from their sides, and are of irregularly alternating degrees of density in their centers, as though they had, by variously intersecting forces, been subdivided into numerous inferior compartments. Commencing at these extreme irregularities, there are all intermediate degrees of symmetry in shape, down to the perfectly globular shape, to which the prevailing forms of these stellar masses manifest more or less approximation. Judging from appearances, therefore, one would say that these masses are evidently in all degrees of progression, between rudimental and ultimate forms, and that, in general, those of the most angular forms are the *least*, while those of the globular form are the *most*, progressed.* This is all manifestly in exact harmony with the hypothesis of nebular and angular segregation, and subsequent firmamental, solar, and planetary conglobation, which we have proposed.

Moreover, these nebular or stellar masses, although they appear in all directions in the heavens, are said to appear, as already intimated, in greatest abundance in the direction of a particular plane, which cuts the plane of our Milky Way at right angles. In the direction, *perpendicular* to this plane, they grow comparatively thin (as do the *stars* in the direction

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* In illustration of the progression from angularity and ellipticity to sphericity in these bodies, I may quote the following from the splendid work of Sir John Herschel, embodying the results of his observations at the Cape of Good Hope. With reference to the engraved figures of two particular nebulæ existing in the southern heavens, he says: "These figures exhibit elliptical nebulæ, normal in their character—that is to say, in which, as the condensation increases toward the middle, the ellipticity of the strata diminishes, or in which the interior and denser portions are obviously more nearly spherical than the exterior and rarer. A great number of such nebulæ, of every variety of ellipticity and central condensation, are figured in my northern catalogue. Regarding the spherical as only a particular case of the elliptic form, and a stellar nucleus as only the extreme stage of condensation, at least nine-tenths of the whole nebulous contents of the heavens will be found to belong to this class; so that, as regards a law and a structure, the induction which refers them, as a class, to the operation of similar causes, and assumes the prevalence within them, of similar dynamical conditions, is most full and satisfactory. To abstain altogether from speculation as to what may be the nature of those causes and conditions, and to refuse all attempts to reconcile the phenomena of so large and so definite a class of cosmical existences, with mechanical laws, taken in their most general acceptation, would be to err on the side of excessive caution and philosophical timidity."—HERSCHEL'S *Results of the Cape of Good Hope*, p. 22.

perpendicular to the plane of the Milky Way), suggesting the idea of a very remote approximation to the horizontal boundary of the stratum. Though it is a thought bordering on the confines of the human conceptive powers, and thus penetrating somewhat into the realms of uncertainty and doubt, it may still be propounded as a query—Whether the plane of this grand stratum of sub-universes, may not indicate the *direction* of the plane of the great Ring of original nebulous materials, from which these nebulæ and stellar systems became segregated and resolved into their present forms, and whether all firmamental creations, revealed by the telescope, may not thus be included within a comparatively small fraction of a segment of *one* of the great cosmical rings which surround the Center of all centers? Though a question so profound can probably never be finally decided by the human intellect, the indication of this grand plane of cosmical formations, tends, so far as it bears upon the subject, to confirm our hypothesis, that all visible nebulæ and stellar systems, are segregations from one general mass of nebulous matter, originally existing on one general plane; and the analogies of all known definite motions and formations in the stellar spaces, point to the idea of a *circular* or elliptical form as characterizing this grand plane of creations.

While this theory gives definite form and order to the subject of our contemplations, it opens the mind to the most sublime conceptions of magnitudes and distances. Herschel estimated that his great telescope would reveal the existence of a star so far removed into space that light, traveling at the rate of twelve millions of miles in a minute, would require three thousand five hundred and forty-one years to pass from that star to our earth. Such, therefore, may be supposed to be the approximate distance of the remotest of those luminous masses which were resolvable into stars by his telescope. He, however, computed that his large telescope would follow one of those large clusters, as a *general* mass, if plunged so deep into space that its light would require three hundred and fifty thousand years to reach us; and, it is thought that the great telescope of Lord Ross would pursue the same object to ten times that distance, or a distance which light, with its inconceivable velocity of motion, would consume more than three millions of years in traversing!* This, therefore, may be assumed as the proximate distance of the *remotest* nebulæ rendered visible by Lord Ross's instrument. If, as is probable, all stellar creations, included in a sphere bounded on all sides by this enormous distance, constitute only a small fraction of a segment of one such circle of creations as we have supposed to surround the great common Center of attraction, it would not be advisable for the reader to attempt to conceive of the dimensions even of *one* of those *whole* circles, much less of the *whole universe;* which latter, however, if *created*, must be inferior to the Creator, and thus *finite.*

But, applying the same *general* laws to the creation of the solar, and the creation of the *universal*, system, it may be asked, "Why is it that either the unitary agglomeration represented by single planets, or the multiplied segregated division which we have supposed to be represented by nebulæ and stellar clusters, did not take place uniformly in *both* systems as the formation from the materials of the nebulous rings?" The answer, I apprehend, may be found in the different *conditions* of the rings in the two systems, as involved in their different magnitudes. In the great system of systems, the distance of particles at any two extremes, must have been so great as to prevent them from having any *appreciable* attraction for each other. *Some* tendency to draw together and form a single permanent mass, indeed there must have been; but this tendency at the more distant points in the mass, must have been so small, and the activity of particular districts, especially after incipient nucleation, must have been so great, and so rapidly increasing, as to give rise to subsequent and numerous mundane forms and systems—the very thing proposed in our theory of segregation, and confirmed by appearances in the heavens.

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* See Mitchell's "Planetary and Stellar World," p. 286–7.

But in the solar system, the distance from one extreme of the annular formation to the other, was comparatively small; and besides this, we may suppose that the varieties of matter in so small a mass, were less extreme, and that their affinities were more intimate, than in the universal mass previously spoken of. There was, therefore, not only a possibility, but a high degree of probability, that the materials of each of the rings of nebulous matter formed around our sun, would assume the form of *one* mass, which would subsequently move in an orbit whose plane and distance would be coincident with the previous ring.

But, admitting the nebular hypothesis, the multipled segregative process actually does seem to have taken place in one instance even in our solar system, and given rise to *several* planetary bodies as the products of *one* ring. It is scarcely necessary to say that we refer to those strange bodies called the asteroids, which revolve at almost equal distances from the sun, between the orbits of Mars and Jupiter, and of which there is now known to be fifteen or sixteen in number. That these bodies must have originated from one primitive mass of planetary matter, there can be but little doubt, as such an hypothesis is necessary to preserve the uniformity of the system, and to supply the vacuity that would otherwise have existed between the orbits of Mars and Jupiter.

If, therefore, instead of being without progeny, and revolving in solitude (which can only be owing to their diminutiveness), each asteroid were attended by a numerous family of children and grand-children (or satellites and sub-satellites), and revolved around one of their number, while performing their general circuit around a superior center, they would exactly illustrate, on a small scale, our idea of the segregated stellar clusters of the universe—each of which latter may be supposed to revolve, as one general body, like the asteroids, in an orbit generally coinciding as to plane, and distance from the great and common Center, with the plane and distance of the great ring of nebulous materials in which it had its parentage.

But it should be understood, that the *fifth* stage in the process of creation, considered merely as a process of *segregation*, is complete with the formation simply of separate angular masses and sub-masses, from the general materials of the nebulous rings.

The *sixth* process in the creative procedure, is a process of *solarization*, or one by which these previously segregated and indefinitely formed masses and their sub-divisions, become established *suns*. This process is accomplished by gravitations to, and emanations from, central points in the segregated masses, on principles essentially the same with those previously explained as applying to the formation of the first great central Body; but in this higher process, the operations may be supposed to be more refined and regular in proportion to the superior refinement of the elements and dynamic agents which are involved. These suns assume specific distances and orbits determined by the laws of equilibrium, and com-hence their harmonious actions and reactions upon each other developing a *sixth* law—the law of universal cosmical sympathy and reciprocation—corresponding to the nervous sympathy and reciprocal action existing between the different organs of the human body, the *little* universe.

The *seventh* and last law and process in this series of universal creations, is that by which planetary masses—bodies destined to become ultimately habitable—were evolved from the previous solar masses. Of course it is to be supposed that these bodies were produced from the solar masses by evolutions of nebulous rings, and by agglomeration of the materials of these, according to principles before explained. This development completes the fundamental structure of the material universe *as such*, and serves as the Basis and material Germ of all subsequent and more refined unfoldings.

The different stages through which the universal mass of materials have passed, from germinal to ultimate forms, may therefore be summarily represented in the following formula:

PRIMARY TRINITY.	SECONDARY TRINITY.
1. Heat-pervaded chaos.	4. Concentric nebulous rings.
2. Luminous attractive nucleus.	5. Segregated masses (from rings)
3. Electro-interactive spheroid.	6. Suns and clusters of suns.

ULTIMATE

7. Habitable worlds.

It is true that we can have no final and absolutely *sensuous* demonstration that such is the structure of the universe, because the telescope, with all its magic powers, has probably revealed, as it were, but an infinitesimal fragment of the great united System. Yet, considering that the telescope has explicitly revealed that the same laws of gravitation and revolutionary motion which apply to our own planetary worlds, apply also to the most distant clusters of stars, thus binding all systems and firmaments together in one family relation, and referring them to a common parentage—considering, therefore, that our own solar system is of itself a *little* universe, exemplifying all the principles involved in the *great* universe, of which it is a child and antitype—and considering, as we may now well do, that the nebular hypothesis of creation is the correct one, and that laws are uniform throughout the whole realm of being—the preponderance of analogical evidence must, we think, be admitted to be in favor of the *general* truthfulness of the theory here propounded. For, in the first place (admitting the nebular hypothesis), our own sun, enthroned in the midst of our system, affords an ocular proof that matter in a primitively diffused state, and obeying the impulses breathed into it from the Divine spiritual source, *will* assume a central, gravitating, and rotating Nucleus; and this hints at the *great* Nucleus, which, on the same principles, seemingly must have *necessarily* been formed in the midst of the originally chaotic materials of the whole universe. Moreover, the rings of Saturn show the forms naturally first assumed by the attracted and emanated materials of a central body, which forms will be of varying distances from the central body, according to their specific degrees of density or levity. Some such forms seemingly must have *necessarily* been elaborated, not only by our own central sun, but by all other suns of sufficient magnitude and activity, and especially by the great Sun of all suns. But such annular forms, of course, can be preserved through subsequent condensation, only in case of the nicest equilibrium in their materials and motions, such as is characteristic of Saturn's rings. If there is any considerable inequality in either of these particulars the annular mass, in contracting, will inevitably resolve itself into the form of one or more bodies, whose orbit of revolution will be such as was described by the position of the previous ring.

This consideration not only explains the origin of the planets satellites, and asteroids, of our own solar system, from the materials of previous nebulous rings, but suggests that analogous singular and multiple conglobations must, *seemingly of necessity*, have, in like manner, been formed in the sidereal spaces, from the materials of nebulous rings surrounding *their* respective centers, these all being subordinate to a *final* and *common* Center, as all created things proceed from a final and common Cause.

We may, therefore, say, that there are many avenues open toward the hypothesis we have propounded respecting the origin and structure of the universe, and many guide-boards (or facts and principles), pointing along these avenues, all in the same *direction;* while, if the mind attempts to travel in a different direction, and in quest of other conclusions, it not only finds no such guide-boards to direct it, and no such avenues open for its passage, but it is constantly obstructed by barriers of philosophical difficulty, and each of the steps of its progress is planted only on the miry and treacherous ground of *assumption.* While, therefore, the mind is ever held open to the reception of new light, and a willingness is preserved to abandon, any present errors for the sake of subsequently unfolded truths, it would seem that we might, without subjecting ourselves to any just charge of philosophical rashness, settle in the present conviction that the foregoing hypothesis, at least as to its *general* and *most essential* principles, can not vary much from the truth.

CHAPTER VIII.

THE SEVEN DYNAMIC AGENTS OR POTENTIAL MEDIA OF NATURE.

To facilitate a clear conception of the relations of the Deity to, and his mode of acting upon, the universe, as well for other important uses, we will now endeavor to attain to some further conceptions of the *dynamic agents* immediately connected with the seven general laws, and their corresponding seven-fold developments, considered in the foregoing chapter.

It was before intimated, on grounds which appear even to transcend mere probability, that the agents immediately concerned in generating in the universal chaotic mass, the first three phenomena of Expansion, Contraction, and Circulation, were Heat, Light, and Electricity. By the agency of these three principles, we have supposed that the mass was successively developed from a chaotic, to a nucleated, and spheroidal form. Another and corresponding trinity of agents was hinted at, which will now form the subject of special consideration and illustration.

In unfolding the doctrine of the seven-fold series, it was shown that the fourth, fifth, and sixth members of such a series, composing a *Secondary* Trinity, bear a certain correspondence, respectively, to the first, second, and third members, which compose a *Primary* Trinity. Thus, as the Primary Trinity of conditions in the universal material mass, consisted of the chaotic, the nucleated, and the spheroidal, so the Secondary Trinity (comprising nebulous rings, segregated and contracting fragments, and developed solar forms) may be characterized as secondary chaos, secondary nucleation, and secondary spheroidation. This being so, and the dynamic elements of the first Trinity being Heat, Light, and Electricity (each probably in a gross degree of development), a carrying out of identical principles will lead to the supposition that the dynamic agents *peculiar* to the *Secondary* Trinity, are such as would *correspond* to Heat, Light, and Electricity, in a *secondary* degree of development, so to speak, without, however, supposing that they are absolutely *identical* with Heat, Light, and Electricity, as these terms would ordinarily be understood. This, however, is a mere deduction from principles and correspondences; let us now see if there are any substantial *facts* to support it.

Such facts are involved in a series of interesting and most important discoveries, made by BARON VON REICHENBACH, a few years ago, and of which we will now speak briefly. The course of experiments which led this ingenious philosopher to the discoveries in question, was commenced by testing the properties of magnets. By the assistance of a number of delicately organized persons, mainly cataleptic patients, in whom the senses, especially *sight* and *feeling*, were in an uncommon degree of exaltation, he ascertained that from either pole of an open magnet, there was constantly given forth a *luminous, flame-like appearance*, visible in a dark room, but only to such as possessed this uncommon acuteness of vision. The flames sent forth from the poles of a large horse-shoe magnet, capable of supporting ninety pounds, were described as about eight inches in mean length, mingled with irridescent colors, and gently flickering and waving, shortening and elongating, and yielding when blown upon, and when the hand or any other solid body was passed through them. The whole appearance was described as being exceedingly beautiful.

This experiment was repeated with many different observers, from all of whom the same general description was obtained—the accuracy of which was further tested by varying the experiments without the knowledge of the observers, and noting the corresponding and uniform variations of the appearances described.

But, in order to obtain still further assurance that those luminous appearances described by others were real, though invisible to himself, the experimenter, by the aid of another scientific gentleman, instituted the following additional test: A very sensitive daguerreotype plate was prepared and placed opposite to a large open magnet, in a closed box, enveloped in thick bed-clothes, so that not a particle of ordinary light could enter it. After the lapse of sixty-four hours, the plate, when exposed to mercurial vapor, was found to be distinctly affected, as by light. Another plate had been, at the same time, similarly prepared, and inclosed in a dark box, *without* a magnet, and after a similar length of time this was found to be entirely unaffected.

The light was also subjected to the test of the convex lens, and was found to be converged and thrown upon the wall in the same way as any other light, *but at a considerably greater focal distance*, which fact of itself proves that the luminous substance was different from ordinary light.

By tests similar to those which were employed with the magnet, it was subsequently ascertained, with equal certainty, that similar lights were also emitted from *crystals*. The flames issuing from the points of large crystals were described by those who could see them, as being somewhat in the shape of a tulip, and singularly beautiful. One young lady used, when ill, to lie awake nights enjoying the sight of the beautiful flame emitted from a large rock crystal which had been left in her room. But bodies confusedly crystalline exhibited but little of this phenomenon, and bodies entirely amorphous exhibited none, but nevertheless gave forth, in common with crystals, magnets, and other things, a still more subtle influence, which will hereafter be described.

Our experimenter subsequently introduced other tests with the view of ascertaining to what extent this newly-discovered force prevailed in nature. He extended the end of a wire through the keyhole of the door of a perfectly darkened room, in which he placed a person whose senses were sufficiently acute to detect any luminous or other phenomena which might present itself as the result of any experiment. The other end of the wire he attached to a metallic plate, which, without letting the observer placed in the room know what he was doing, he would push out into the rays of the sun, or of the moon, or of the planets, or fixed stars; or would place an animal, a plant, or his own hands, upon its surface; or would subject it to chemical action, or the action of heat, cold, or electricity. He found the results of all these experiments nearly uniform in one particular, viz., in respect to the emission of a narrow tuft of light several inches in length, from the end of the wire, which would begin to be visible soon after the agent experimented upon was brought to bear upon the plate. Indeed, whatever possessed in itself the least molecular force or action, was found to be capable of evolving a greater or less degree of this luminosity.

Other processes gave an *analysis* of these lights, and showed remarkable relations in their constituents, to different points in the terrestrial and celestial spheres. It was found, for example, that the flames from the poles of a large electro-magnet (which were much larger and brighter than those emitted from the permanent steel magnet) would, after the galvanic circuit was completed, slowly and gradually resolve themselves into distinct stratifications of color, presenting, in fact, the seven-fold luminosity of the rainbow, with the red below and the violet above. These colors, again, were found to vary with the varying distances at which they were viewed—the whole of the appearances, when taken together, showing that each one of the differently colored radiations terminated, for the most part, at a certain distance from the common center of luminosity. This distance, though Reichenbach did not remark it, was probably nearly the same all around; the differently colored rays thus forming a system of concentric spheres of light.

Guarding against errors which might arise from variations in these colors as resulting from the varying distances at which they were viewed, our philosopher was now prepared for another interesting step. Having previously found that a magnetic bar, with poles in the direction of the dip, always emitted different colors from those it gave in the meridian, he proceeded to ascertain what effect other positions of the pole would have upon the character of the luminosity. For this purpose he caused a magnetic bar to revolve lengthwise, first in a vertical circle in the direction of the magnetic meridian, then in a vertical circle in a direction east and west, and lastly, in a horizontal circle. He found that in each case different colors were evolved according as the magnet was pointed in different directions, *and that as it passed, in each case, through a complete circle, it evolved, in regular succession, all the colors of the rainbow!*

By subsequent electro-magnetic experiments with an artificial globe called the *terrelle*, Reichenbach succeeded in precisely reproducing the appearances of the *aurora borealis*, and may be considered as having probably afforded a complete solution of that interesting phenomenon.

We find in these remarkable facts a complete verification of our previous hypothesis, so far as it relates to an essence which may be called *secondary light.* While this light is, in some particulars, similar to ordinary light, it differs from it totally in others, as the foregoing description renders obvious; and it therefore may be judged to belong to a somewhat *different degree* of natural developments. Considering this, therefore, as one of the members of our supposed Secondary Trinity of imponderables, we shall now see that our hypothesis, so far as it relates to the other two members, is not without the support of similar facts.

When a horseshoe magnet was closed by an armature, all appearances of a luminous flame would immediately cease, but would be instantly reproduced on the removal of the armature. This establishes the probability that the same force which in the open magnet generates the luminosity, is, by the application of the armature, simply rendered *latent*, so far as its flame-generating power is concerned, but that it nevertheless still exists in the closed magnet, and acts as an *internal principle*, or as a principle corresponding to fire or heat. This view is further confirmed by the fact that one of Reichenbach's subjects saw even closed magnets, and, indeed, metals of all kinds, luminous in the dark, as though they had been heated to incandesence—without, however, giving forth any flame-like scintillations. Such, then, are the evidences of a *Secondary Heat.*

But still more conclusive indications were obtained of an *electroid*, or *electricity-like* agent, as connected with the identical sources of these other phenomena. It was found that magnets, crystals, or whatever afforded the phenomena of this attenuated light, together with many things which did not, also emitted an influence or *aura* which was capable of acting decidedly upon the nerves of a certain proportion of persons This *aura* was described as warm or cold, according as it was received from either pole of the magnet or crystal, or according to the positive or negative quality of any other source from which it was obtained. It was found capable of acting at a distance, and of being transmitted through conducting media, and of sometimes acting so powerfully upon the sensitive as to produce catalepsy and dangerous spasms. Thus, at one time, during the illness of one of Reichenbach's employées, he held a large magnet, capable of supporting ninety pounds, at the distance of six paces from her feet, as she lay on her bed, with her physician by her side. While the armature was attached to the magnet she felt no peculiar sensation, but the instant it was removed she fell into tetanic spasms and complete unconsciousness from its action. The armature being again attached, the girl slowly recovered her senses, and her physician advised that the experiment should not be repeated. Another lady, subject to attacks of catalepsy, could instantly detect the approach of an open magnet, though the latter was brought, without her knowledge of the intention, near the head of her bed, on the opposite side of the wall.

Magnets, crystals, etc., were also found to powerfully *attract the hands* of cataleptic patients, even during the unconsciousness of their fits.

It was also ascertained that amorphous bodies, in common with others, sent forth this ethereal influence, though, as before shown, they gave forth *no light.* And here it was more fully ascertained, *that the ethereal emanations from different substances, were specifically different* as to their effects upon the human nerve, thus affording indications of the distinctive characters of the emanating sources. One peculiarity of amorphous (that is to say, uncrystallized and unorganized) bodies was, that their exhalations gave a nauseous, accompanied by either a cold or warm, and sometimes also a prickly, sensation, to persons whose nerves were in a sufficiently sensitive state to test them; and some bodies imparted these sensations in a greater degree than others. In the investigation of this point, Reichenbach took the trouble to try more than six hundred bodies with reference to their nauseating force. The young lady through whose aid the tests were made, could easily give to every substance its proper place in the scale of force, and this she could repeat, without failure, after intervals of several days. "It soon appeared," says our philosopher, "that these bodies arranged themselves according to their electro-chemical value, and, indeed, in suchwise that the highly electric stood at the top, and the indifferently so at the bottom of the scale, without regard to their polar opposition."

When the same substances were tried on this same young lady while in a state of catalepsy, "the results were the same in kind, but in degree much stronger. The substances at the top of the scale, laid in her hand, caused violent spasms, whereby they were thrown at a distance, and her hand then, as usual in catalepsy, retained the new position. . . It was soon observed that many substances began to act before they touched the hand, and it was enough to place them near it."

These experiments were repeated, not only with other nervous patients, but with several gentlemen in a state of perfect health, with results differing from the above no more than what might easily be accounted for by the different degrees of susceptibility in the experimenters. The different substances tried are enumerated by Reichenbach according to their specific effects, but it will here be sufficient to say that *sulphur* was found to be the general representative of those which, without contact, gave the sensation of *cold*, and *gold* of those which gave warmth; and almost every one whose hand was made to pass over small plates, coated respectively with these substances, felt, in some degree, these corresponding sensations, and some felt them quite vividly.

Without any knowledge of Reichenbach's investigations, Dr. J. R. Buchanan, of Cincinnati, was engaged, about the same time, in a similar course of experiments with amorphous bodies, and developed results similar in character, but in some respects even still more decisive. Without here entering into the details of his experiments or inquiries, it will be sufficient to state that they resulted in establishing the fact, that *medicines*, holden in the hand of the patient, even when wrapped up in paper and concealed from view so as to guard against the effects of imagination, will, in a large proportion of cases, have all the effects that the same medicines will have, taken internally. Out of about one hundred and thirty medical students belonging to a class which attended the lectures of Dr. Buchanan, forty-three declared themselves fully affected by this experiment, to which they had been subjected during the delivery of one lecture.*

Similar phenomena have been observed as the results of similar experiments in other instances, but we have no room for further details on this branch of our subject. In all such cases the action of the medicines is doubtless due to an absorption of their subtle and *characteristic* emanations, through the pores of the skin, whence they are diffused through the nervous medium of the system, acting upon the vital forces which control all the functions of the physical organism.

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* See "Buchanan's Journal of Man" for February, 1849, Art. 1.

By experiments which placed deception out of the question, it was found that these ethereal influences of different substances, could be conducted through wires to a distance of from three to one hundred and thirty-two feet, so as to be distinctly perceived by the more sensitive of Reichenbach's experimenters.

But a fact still more important in its bearings was, that different bodies placed in contact with, or in close proximity to, each other, would mutually impart their influences to each other, so as to modify or totally change the effects which they would otherwise produce upon sensitive patients. In other words, and to use a figure of speech that will be perfectly understood, they would mutually *magnetize,* or *mesmerize*, each other—would enter into a sort of *rapport* or reciprocal sympathy, by an interdiffusion of their spheres or ethereal emanations. Thus it was found that sulphur, which of itself would impart a cold and prickling sensation to impressible persons, even at a distance of several feet, and without a conducting wire, would, by contact or close proximity to other substances, empower them, for a time, to give forth a similar influence, even though their own proper influences might be of an opposite, though less powerful, character; and so of other substances, and their modifying influences upon others.*

The general reliability of the foregoing and other alleged results as obtained by Reichenbach, will not be disputed by those who know the character of the experimenter, or who, from a careful perusal of his report, have noted his exceedingly cautious mode of proceeding. Reichenbach is known throughout Europe as a chemist second only to Liebig himself, and, speaking of this same course of investigation, Professor Gregory declares that "it was not possible for any experiments or discoveries to be presented to the scientific world by one more entitled to confidence in every point of view." Besides this, his more important experiments have been repeated by others, and their results verified, in many instances, both in this country and in Europe.

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* For further details of these interesting experiments and their results, the reader is referred to Reichenbach's ' Physico-Physiological Researches on the Dynamics of Magnetism," etc., New York. J. S. Redfield.

Availing himself of the plasticity of the German language, Reichenbach designates the new force (rather *forces*) which he discovered, by the German suffix "*od*," and indicates the sources whence this force is obtained, by their names prefixed to that syllable, as "magnetod," "crystallod," "thermod," "photod," etc., as respectively indicating a connection of the force with magnets, crystals, heat, light, etc. In the English language, therefore, this new imponderable has been rather clumsily designated as the "odic force," or "odylic force."

But the various phenomena exhibited by this so-called force, show that it is not simple but complex, or rather that it involves a number of distinct forces. Its rudimental existence in the closed magnet, as also in various unmagnetic bodies, was not only intimated by the luminous and incandescent appearance of the bodies of metals, before spoken of, but is also implied as an antecedent of the luminous, flame-like appearance which it engenders at a further stage of development—just as the existence of common caloric is implied as an antecedent of common flame. The light itself is a *second* development; and the ethereal *aura* which, without any luminous phenomena, acts upon the human nerve, is a *third*. The three, therefore, may be variously characterized as "odic heat," "odic light," and "odic electricity," or "odic ether;" and here we have our previously conjectured Secondary Trinity of dynamic agents, corresponding to the Primary Trinity, which consists of Heat, Light, and Electricity, as these terms are ordinarily understood.

In the same way in which the *Primary* Trinity of dynamic agents is concerned in the Primary Trinity of each system of physical developments, the *Secondary* and *corresponding* Trinity (in connection with the Primary, which is *still* and *always* in force) is concerned in each *secondary* and *corresponding* Trinity of developments, with their peculiarities.*

Thus the principle which we have called "Odic Heat," may be considered as the internal love-principle by which particles associate in organic forms, and therefore is the *fundamental* dynamic principle connected with the fourth law—the law of *Aggregation* or *Organization*, whether relating to the universe as a whole, or to any of its definitely constituted parts.

The "odic light" appears to be expressive of the ethereally aspirative operations of the organic structure from which it proceeds. It was before mentioned that this light consisted of the seven different colors of the iris, which seemed to surround the center of luminosity as so many concentric spheres of light; and that when Reichenbach caused a magnetic bar to revolve lengthwise on horizontal and vertical planes, the light exhibited successively all the different colors of the rainbow, as the magnet was pointed in the different directions in respect to the earth and heavens, which lay in the plane of the circle. I can not but regard these results as exceedingly interesting and important, as showing the relative degrees and states of *polarity* of particular points and directions of the earth's surface, and of the surrounding and celestial spaces—thus, as suggesting the different *qualities* or *states* of the materials of which the earth and all correlative creations are composed—thus, as suggesting the correlative *affinities* and *forces* by which these materials became associated in their present structural form—and finally, as suggesting something of the perpetually repeated round of changing influences and ethereal forces through which (in analogy to the revolving magnet) the earth and all celestial bodies pass in performing their rotary and orbitual revolutions. If there is any validity in these suggestions, then these degrees of polarity, states and affinities of matter, changing ethereal forces, etc., all exemplify the *seven-fold series* as corresponding to the seven colors of the iris, which, in the experiment referred to, were successively given forth by the revolving magnet. And, applying these remarks (as analogy would justify us in doing) to *all* mundane organizations—to the solar system, the sidereal systems, and to the whole universe as one Body—as well as to the earth, we have in the "*odic light*," a universal dynamic correlative of the *fifth* law—the law of *segregation*, or the law by which unity is divided into parts of different and connected gradations.

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* It is not claimed that these dynamic principles apply *identically* to each and every seven-fold system of developments, as to some systems they apply only by their natural representatives, analogues, or correspondents

Concerning the *third* member of this trinity of agents—the "odic," electroid, or ethereal emanation which was found to produce such marked and singular effects on the sensitive human nerve, the following remarks may be submitted:

1. All things subjected to careful experiment, whether in the animal, vegetable, or mineral Kingdoms, or in the celestial spaces, were found to send forth this subtile eman-

ation, which in each case may be called the *sphere*, *or* ethereal atmosphere, of the substance or form from which it proceeds. It may therefore be presumed, on analogical grounds, that things also not available for experiment, and that, indeed, absolutely *all* things, from atoms to worlds and systems, and even the whole universe, considered as a Unit, are in like manner characterized by a surrounding and pervading ethereal sphere.*

2. The emanating spheres of smaller bodies associated with larger ones, must necessarily be *included in* the emanating spheres of the larger bodies on which they rest or depend. The sphere of a single particle of mineral matter, for example, is comprehended and encircled in the general sphere of the whole crystal of which it forms a part; and the same remark applies to particles and organisms in other kingdoms in nature. The spheres of all minerals, vegetables, animals, etc., separately and collectively, are involved and comprehended in the general sphere of the earth; the sphere of the earth, together with the spheres of all other planets, with the satellites and comets, is involved and comprehended in the general sphere of the whole solar system; that sphere is comprehended in the general sphere of the great stellar vortex in which, accompanied by myriads of like systems, it moves; and that sphere is comprehended in the general sphere of the whole Universe; and that sphere is, in like manner, enveloped in, and pervaded by, the great sphere of the infinite Divine Being, which is the Essence of all essences, the Force of all forces, and the Vitalizer of all vitalities! Here, then, is a

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* This doctrine of "spheres" was taught by Swedenborg, and by others since his day. It may almost be said that it has a sufficient foundation in the developed intuitions of the human mind, and it would stand even independent of Reichenbach's most conclusive scientific verifications.

progressive gradation from the smallest to the greatest, from the infinitesimal to the Infinite, from the atom of matter to the incomprehensible fullness of a Divine Spiritual Being.

3. The spheres of all bodies in the universe, from smallest to greatest, while they are *generically similar*, are *specifically different*, and the sphere of each body corresponds to that body's internal character. This is a conclusion which, as regarded merely by the reasoning powers, is necessitated, by the obvious differences in the intrinsic nature of things, and it is confirmed by the differences in the effects produced by the ethereal emanations of medicines and other substances, and even by the heavenly bodies, and by different districts of the celestial hemisphere which were subjected to tests.

4. As it was proved that the spheres of sulphur, gold, medicines, etc., acted and reacted upon, and *mutually modified*, each other, and this, too, when the solid bodies were a distance apart; so, carrying out this principle, it may be presumed that the spheres of *all* bodies, terrestrial and celestial, from smallest to greatest, from atoms to worlds, stellar systems, and the whole universe, in like manner, *act and react upon, and modify each other, according to their relative degrees of magnitude and power.* And this mutual interdiffusion of spheres, and their harmonious and reciprocal action and reaction upon each other, while each particular form and system preserves its own identity, constitute an important part of the *physiological and functional operations of the great Anatomical Structure of Creation*, and which, as before intimated, corresponds, in principle, to a single human body. The great ethereal Sphere of *all* spheres may be considered as the *sympathetic nerve-essence* of this Anatomical Structure, viewed as a whole, while the sphere of each sun, world, and atom, may be considered as its *own particular* nerve-essence; and it

is through these nerve-essences that each part of the whole Body sympathises with all other parts, and that the equilibrium and harmonious functional operations of the whole system are preserved.

This subtile and variously qualified electroid or magnetoid element, therefore, being the *sixth* in the seven-fold series of dynamic agents, is intimately allied to the sixth general law, which we have seen is a law of harmonial and sympathetic reciprocation.

It is true that the discoverer of these previously unknown subtile agencies did not exhibit, and perhaps did not, to any extent, perceive, their *cosmological* bearings, especially as these are attempted to be set forth in the foregoing remarks. His main object appears to have been to develop *facts*, leaving the more comprehensive *conclusions* to which these might naturally conduce, to be unfolded by subsequent investigations, and by others as well as by himself; and as his facts, by their publication, and their verification by the parallel experiments of others, have become the property of the world, any one may elaborate and synthesize them who has the inclination and mental qualifications to do so.

In respect to this "odic," or magnetoid element, which pervades, and emanates from, greatest and smallest things, the following additional and important remarks may be submitted: As this influence, proceeding from various bodies, near and remote, was found to have such remarkable effects upon the sensitive human nerve, it may be considered as being closely allied, in its general nature, to the nervous influence pervading the human body, and emanating from *it* as an "odic" sphere. Indeed, Reichenbach actually proved its identity, in the general sense, with the medium through which one human being produces those effects upon another commonly known as "magnetic" or "mesmeric;" and the world is indebted to that philosopher for physical demonstrations in this department, which place the fundamental doctrines of Animal Magnetism beyond all possible doubt.

Now, operations called "*magnetic*," as performed by one human being upon another, are known to depend greatly, for their character and efficiency, upon the exercise of the *will.* If, therefore, the medium through which such magnetic operations are performed, is generically the same with the "odic" spheres given forth by all bodies in nature, do we not find in this "odic" element *the general connecting link between mind and matter?* If, upon the basis of this certainly plausible idea, we should suggest that this everywhere present "odic" element, as associated with the different bodies in nature, and with nature as a Whole, may hereafter prove to be a medium through which mind can, in certain conditions, and to a certain extent, act upon and move outer tangible matter, without the contact of the physical organs, the suggestion would doubtless be met with general incredulity, especially by those who are not familiar with certain strange phenomena of our day. It could not be esteemed more incredible, however, than would have been an assertion made fifty years ago, that by a peculiar mechanical contrivance, a certain subtile agent in nature might be efficiently employed in the accurate and instantaneous transmission of thought to the distance of a thousand miles! But not to press these thoughts for the present, if our foregoing generalizations are correct, then we hazard little in saying, that as the all-pervading "odic" sphere of the universe, as a whole, in its ultimate degree, connects with the sphere of the Deity, *so the Deity, through this medium, acts upon the universe, in the same way as any two juxtaposed substances or forms in nature act upon each other* *through their "odic" spheres*, and as was illustrated by experiments before related. And as the Deity, moreover, is a *personal* and *intelligent* Being, he may through this medium act, not only *spontaneously*, but *volitionally* and *directly*, upon the universe, or upon either of its corresponding sub-creations, and control it to any extent which may comport with the integrity of his general plan.

But we come now to another point: As each previous stage of creation, with its peculiar law of developments, from the first to the sixth, was thus accompanied with, or related to, a corresponding dynamic agent, the same fact may be supposed to hold with reference to the *seventh* stage, which, in the cosmical creation, as before shown, consisted in the development of *habitable worlds.* And as this is the *final* development of the seven-fold cosmical series—and brings the physical structure of the universe *as such*, to a completeness—so we may suppose that the *dynamic principle* related to this development, is also the ultimate and completion of *its* series. And being the last of a series in which there is observed a progressive refinement from the first, at least to the sixth, it may be supposed to unite in itself the principles of all the others in a still superior degree of refinement.

But we have seen that the series of universal cosmical developments included in what we have called the great Kingdom of Materiality, must have been based upon, and have sprung from, an antecedent, unoriginated, and *infinite* Kingdom of Spirituality, which we call God. If this same Principle, like the vital elements of the germ of a tree, lies at the basis, and is reproduced at the completion, of the unfolding, then this seventh dynamic principle, concerning which we are now inquiring, can be nothing less than a *degree of the seven-fold elements of the originally generative Divine Spirit, now em-*

bodied in cosmical investiture. Viewed in this light, this seventh dynamic principle may be called *Soul* or *Vitality*—the Soul or vital Principle of the cosmical universe, or the Principle by which it, *as* a universe, *lives* and performs all its normal movements!

Let me not, however, be understood as intimating that the *all* of God was thus embodied in the universal cosmical structure. Neither the universe of material worlds, nor of heavens, nor the heaven of heavens, can contain HIM who is absolutely INFINITE, and it must have been, *comparatively* speaking, an exceedingly small ray from his interior and ineffable effulgence that sufficed to give birth to, and move and regulate, the material structure which we have been contemplating, however sublime and inconceivable to human intellect this may be. Nor was the Divine embodiment of which we speak, necessarily an embodiment which, in its immediate exterior manifestation, would take the form of what is generally understood by *intelligence;* though intelligence, as an attribute of a much higher and more interior degree of the Divine Spiritual Constitution, was the projecting, planning, and (acting through the ultimately refined "odic" spheres, or *quasi* nerve-essences of his creations, before spoken of) is the constantly supervising and all regulating Principle. The Divine qualities *as* intelligence were subsequently and, at a much higher degree of creative progression, finitely expressed in the *human microcosm*, which is expressly declared to be an "image of God."

It is, however, here submitted as a truth which, it is believed, will become more evident in proportion as its foundation and bearings are better understood—that the *identical principles* of what we know as *intelligence*, are embodied (though not *as* intelligence) in each kingdom or system of creation *below* man, and finally in the universal kingdom of cosmical forms; these various descending embodiments bearing to each other the relations of descending octaves. Thus what is called *intelligence* in man, is called *instinct* in animals. But *plants* also, have a kind of instinct; and so in lower degrees, have minerals, worlds—the whole universal System of worlds—each embodying and representing a lower degree of what may receive the general designation of Love, Wisdom, and Volition; or Expansion, Attraction, and Circulation; the lowest triune degree of which is embraced in the functions of Heat, Light, and Electricity.

The seventh dynamic principle of the universe, therefore, which pervades and governs all other principles, is only an embodiment of that degree or octave of the principles of the Divine soul which is in immediate relation with, and serves to control the functional operations of, the universal cosmical Body; while the *higher* degrees of the seven-fold Divine harmonies, flowing downward from the infinite sources of Divinity, are left to be embodied and represented in subsequent and more refined creations, or remain at infinite removes above the sphere of all terrestrial and celestial forms.

Of the doctrine intended to be conveyed in these remarks, a more distinct and enlarged understanding will be obtained as we proceed.

But, presuming that the reader already sufficiently comprehends the fundamental principles herein set forth, he is desired to bear constantly in mind, that the dynamic principles of the cosmical creation, were not *developed by* the creation itself, but *developed it;* and the same may be said of the vitalizing and moving elements of *all* degrees of material unfolding. The dynamic principles (constituting, indeed, what may, in the aggregate, be called the general Soul) are thus the immediate Cause of the outer development (or Body), which is the Effect.

And here it may be remarked, that if there is *any* relation between Cause and Effect, it must not only be a relation of *generals*, but of *particulars*; and thus the Cause must be a precise archetype of which the Effect is an antitype or embodied representative; and hence the two must, throughout, precisely correspond to each other. Every *degree* of creation, therefore, may be considered as a precise outer expression of the corresponding *degree* of Divine Love, Wisdom, and Energy which vitalizes and governs it, and in which it was previously contained as an archetype.

Moreover, these interior Divine dynamic principles, together with their prescribed *modes* of action, constitute the operative *laws* of nature. According to this view, while there is a *law* for every class of natural and even spiritual phenomena, and all things may be explained without a resort to *contra*-natural or *contra*-legal agencies, laws, on the other hand, are not those lifeless, unintellectual fatalities which they are represented to be in prevalent philosophies of the day, but they are the express modes of perpetual *Divine volition.* In looking, therefore, upon this universe, with all it contains, as *law*-governed, we may, at the same time, look upon it as *God*-governed. But on this point, more in its proper place.

If this view is correct, then there is, in reality, no necessary antagonism between materiality and spirituality, nature and heaven, reason and revelation, science and theology, but each may be regarded, when correctly understood, as the exponent of the other. Quite distinct, however, is this view from that gross speculation which makes of God nothing more than the ultimately sublimated and self-moving essences of the natural universe—a kind of universal hyper-galvanic battery which, by its perpetual and self-generating action, produces solar and planetary revolution, terrestrial changes, and those movements in the refined essences of the human brain which constitute *Thoughts.* In our philosophy, God is God, and nature is nature—the two being eternally distinct, though intimately connected and co-related with each other.

CHAPTER IX.

DEFECTS OF PREVAILING COSMOLOGICAL THEORIES

If the foregoing theory of the origin, structure, dynamic agents, and laws, of the universe, has any foundation in truth, it can scarcely fail to throw important light upon some still ulterior questions relating to the prescribed distances, motions, reciprocal attractions, etc., of planetary and sidereal creations. It may even show that some time-honored theories upon these subjects, however sanctioned by the authority of great names, are, in certain particulars, radically defective; and this it will do, if at all, by transcending them in the ease, naturalness, and completeness with which it accounts for certain existing phenomena.

It was supposed by Sir Isaac Newton, that all rotatory and orbitual motion of the heavenly bodies, originated from a *primary and external impulse* received from the hand of the Creator, as they were launched into space. To this was added the philosophical axiom, that any body put in motion *in a vacuum*, will continue forever to move in a straight line, unless deflected from its course by some other force. This deflecting force, as applied to the motions of the planets, Newton found in the law of *gravitation*, which was by him proved to apply to all planetary bodies. By the precisely counterbalancing action of these two forces, called the centrifugal and centripetal forces, the motions of the planets were supposed to be regulated in circular or elliptical orbits round the sun, the specific distances of these being greater or less according to the nearness or remoteness of the point where these two forces were exactly balanced against each other.

But Newton soon found this theory, seemingly perfect in other respects, encumbered with difficulties in respect to the *stability* of the system. He found that the different planets were not only attracted by the sun, but mutually attracted by each other. These different attractions, varying in intensity in the inverse ratio of the squares of distances, according to a law discovered by Kepler, were accompanied by *perturbations*, producing irregularities in orbitual motions which were subject to secular increase. The system, thus, left to its own internal provisions, seemed to prophesy its own progressive derangement, and its ultimate entire disorganization; and Newton felt impelled to call upon God to avert such a catastrophe, by supplying a force from *without*, which he supposed did not exist *within*, the system.

The calculations of subsequent mathematicians, however, served, in a good degree, to dispel these gloomy forebodings, and led to the conclusion that the irregularities and apparent incipient derangements in the motions of the system, would finally reach their maximum, after which there would be a gradual return to the condition of primeval equilibrium; that thence there would be a progressive tendency to irregularity in the *opposite* direction, to be succeeded by another reaction; and that the perpetual vibrations of these irregularities, like the oscillations of a mighty pendulum, would serve to mark the hours and moments of eternity!

This conception of the laws, internal arrangements, and movements, of the system, together with the apparent mathematical evidences which have been arrayed in its support, can not otherwise than be regarded as one of the greatest triumphs of human genius. Yet, even while overwhelmed with a sense of its sublimity, one can not well suppress a sense of sadness as he contemplates its cold, mechanical lifelessness —I had almost said Godlessness! Contemplated in this light, the universe appears somewhat analogous to an ingeniously constructed machine, which is wound up, and left to go of itself, while its maker withholds all further exercise of power from it, and forever withdraws all immediate personal care over it, as being unnecessary. With this philosophy impressed upon our minds, we look up into the heavens, and, though we behold incessant motion and activity in every direction, we see no necessary evidence of immanent life or spirit—nothing with which our souls can sympathize as the present pervading *Animus* and constantly impelling Cause of the phenomena we behold; and it is only by an almost painful stretch of the powers of inductive reasoning, that we can attain to any substantial conviction of a spiritual or voluntative Cause, as having been connected with the system even at its *origin!*

It may be added, that thousands of persons, on arriving at a full comprehension and conviction of the truth of the Newtonian theory of a merely mechanical universe, and of *vacuity* in the interplanetary and interstellar spaces, have anxiously inquired, "Where and what, then, is that *spiritual world* to which our interior natures aspire, and for which Revelation encourages us to hope?" and nature, viewed in this aspect, has not only refused to respond in language which appeals to the conceptive and reasoning powers, but has interposed a cloud of darkness and doubt between the inquirer and the subject which he seeks to comprehend! In its efforts to satisfy the irrepressible yearnings of the spirit within, Fancy has erected a formless, unextended, unsubstantial—even unaerial—figment, that bears no relation to space or the material universe, or to any of the rational faculties of the soul; and in this mankind have been told to have *faith*, as the place or state of future human destination! But a *rational* faith in such an utter inconceivability is out of the question, and an *extra*-rational and mere dogmatic faith, in such an idea, can not generally, if ever, be kept free from superstition, and hence, from a greater or less degree of mental degradation and slavery. Hence, in case of full adoption of the Newtonian system of cosmogony, a determination to follow only the convictions of *reason* will necessarily tend to skepticism with reference to *spiritual*, and to some extent even with reference to *Divine* things; and there is no latent force in the theory which, by any development, can ever correct this mental aberration. In the spirit and tendency of this merely *mechanical* mode of philosophizing upon the universe, may, I apprehend, be found the main cause of the growing materialism and skepticism of these modern days, especially among minds called *scientific*.

Subjected to the test of rationality, however, the Newtonian system, in at least one of its features, seems to be almost as bad off as the only spiritual and theological theories that can be rationally associated with it. It predicates mutual gravitation of any two distant bodies, while it fails to recognize, if it does not, by implication, entirely preclude the idea of, any intervening gravitating agent. But that any two bodies can in any way act upon each other, either without immediate contact, or the intervention of some substantial medium by which they can touch each other, is utterly inconceivable, and can no more be supposed than any effect can be supposed to be disconnected with an adequate cause. We do not, however, charge the theory with *absolutely* and *necessarily* precluding such a medium; but by manifesting, at its very starting point, such a strong inclination to the idea of absolute *vacuity* in the interplanetary spaces, it not only fails to provide such a medium, but, in effect, discountenances the idea that such exists. In the theory which we have maintained in the preceding pages, however, the medium in question is abundantly provided.

Moreover, the system as conceived by Newton can not, after all, be contemplated without some degree of apprehension in regard to its *safety*. For, notwithstanding the figurings of subsequent mathematicians respecting the reaction which tends to restore lost equilibrium, if we do away with the immediate immanence of Divine Vitality—in other words, with the immediate presence and agency of that *degree* of the Divine Essence and Power of which the universe forms a suitable habitation, and which is necessary to the life and functional operations of the latter as of one Body—then there are many chances against the existence of an *absolute equilibrium* in the different parts and forces of the great Whole: and if there is ever a disturbance of the equilibrium to an extent which can not be entirely restored by a counter oscillation, even though this be only the fraction of the weight of a planet, or even the amount of a single pound, the disturbance will progressively aggravate, and a universal catastrophe will be the final and inevitable result!

If, therefore, the stability of the universe depends merely upon the nice counterpoise of the centrifugal and centripetal forces, as independent of this constant Divine Force, and of any *elastic*, *active*, and *reactive* medium to keep the various celestial bodies within prescribed boundaries, then human reason can not withhold the suspicion of *danger* as it contemplates the stupendous Machine, or suppress the apprehension that it may one day fly to pieces, and involve us all in the common wreck! This apprehension greatly increases, when it is considered that Newton's hypothesis of absolute vacuity in the spaces through which the celestial bodies move—an hypothesis upon which, according to him, the equilibrium between the centrifugal and centripetal forces necessarily depends—has proved unfounded, and that the phenomena of retardation of comets in their orbits, has proved that the interplanetary spaces are pervaded by an attenuated fluid or ether, capable of exerting some resistance to their progress.

It is here submitted, with all due deference to the superior intelligence of many who have never entertained a doubt of the entire truthfulness of Newton's theory, that that theory, at least without essential modifications, would probably never have been propounded by Newton, or adopted by others, had the theory of the nebular origin of the universe, with its accompanying evidences, and natural corollaries, been previously subjected to familiar contemplation.

We now proceed to briefly unfold a theory respecting the foregoing subjects, which, whatever may be its imperfections, seems to the writer, at least, much less encumbered with difficulties than the merely mechanical theory of Newton, while it is certainly more compatible with the idea of an immediate and universal Divine superintendence.

CHAPTER X.

GROUNDS OF STABILITY AND GENERAL ECONOMY OF THE COSMICAL STRUCTURE.

As a preliminary step toward a due comprehension and appreciation of the theory now to be offered respecting the internal forces, movements, grounds of stability, and general economy of the universe, the reader is requested to bear distinctly in mind that *principles* operate indifferently upon a large and a small scale—that the magnitudes and distances of the objects to which they apply, are absolutely of no consequence as affecting the essential nature of their operations.

Now, in the light of this truism, let us suppose some simple vegetable form—say an apple—to be placed under a microscope so exceedingly powerful as to magnify it to the apparent size of that immense spheroid of stellar orbs with their planets, which is known to us as the Milky Way, and in the midst of which our world is situated. We will suppose that the pores of the apple would, in that case, appear of a magnitude equally great with the interplanetary and interstellar spaces, and that the molecules would be magnified to the apparent size of worlds. Moreover, the internal motions of the molecules, observing the natural order of vegetative circulation and progression, would bear a certain resemblance to the rotatory and orbitual motions of suns and planets, and all, obeying the law by which the distinct stratifications and compartments of the pple are formed, would give an appearance somewhat similar to distinct systems, and systems of systems of suns and planets, as these are successively brought into the field of a telescope. Suppose, that after this optical arrangement is completed, some learned Newtonian astronomer, who is entirely ignorant of its nature, is invited, on some clear evening, to look through the instrument, which is represented to him as a newly invented *telescope*, instead of a *microscope*. The astronomer gazes with wonder and astonishment, and thinks he has obtained a new and favorable view of some stellar and planetary creation which has not before appeared to him exactly in the same aspect.

"Well, Mr. Astronomer," demands an inquirer, "what is your opinion respecting the origin of the motions, the laws of operation, and the source of stability, of the system which you are now surveying?"

"Why, undoubtedly," replies the astronomer, "the *same principles* are applicable here that apply to *all* planetary and stellar creations;" and if he added no more, he would thus far be correct. But he continues, "Undoubtedly each one of those bodies received a certain mechanical impulse as it was launched into space from the hand of the Creator. Each one moves in a *vacuum*, and would have continued its primitive motion in a *direct line* forever, had it not been deflected from its course by an equal and perpetually operative force of *gravitation*, whence its *present* motion is in a circular or elliptical orbit. If either one of those revolving bodies," continues the sage astronomer, "were arrested in its orbit, and the centrifugal force were thus destroyed, gravitation would immediately draw it to the central sun, and this would probably so derange the equilibrium of the system as to ultimately produce a universal catastrophe!"

If the astronomer is now shown a *direct* view of the real subject of these speculations—is shown that it is merely an apple—he will consider this as of itself a sufficient refutation of his speculations, so far as *that* object was concerned; because he considers the internal molecular motions of the apple as being governed by a principle of *life*, and this he regards as of itself amply sufficient to keep up the equilibrium of its particular parts.

But each cluster, or firmament, of suns, with its planets, is, in *principle*, but an apple on a large scale. Some of the more distant, and less easily resolvable, nebulæ, indeed, appear to a telescope of small power, almost in the identical form and size of an apple; and, viewed apart from all other considerations than those suggested by their own proper aspects, as the white, milky spots, which they present to telescopes incapable of resolving them, one might have easily conceived that they were agitated by internal motions; but the conception that these internal motions were referable to external and mechanical impulses, and that the moving bodies (which the distance of view reduces to molecules) were sustained in equilibrio by counter impulses, according to the Newtonian theory of planetary motion, would have been as unnatural and far-fetched, as would be precisely the same theory applied to the internal molecular motions of an apple.

Indeed, it is conceivable that one might be miraculously elevated above the whole plane of sidereal creations to a distance so great that, as he looked down upon the whole universe of firmaments, the *whole* might present one unresolved mass apparently, from that distance, no larger than the size of an apple. Now, when we remember that in the workings of *principles* there is absolutely no distinction made between great and small bodies, how naturally may it be supposed that the whole universe, with all its included sub-universes is pervaded, like the apple, by an internal principle of *Life*, and that *this* is the cause of all its internal motions, and the sustainer of equilibrium among all its constituent orbs, which, to it, are in reality no more than what the molecules are to the apple!

But let us endeavor to obtain a more distinct view of some of the constituent elements embraced in this general theory: Our theory, before propounded, of constantly *emanative*, as well as constantly *gravitative*, forces as connected with planets, suns, systems, and firmaments, seems, if correct, to necessitate the conclusion that universal space is constantly *filled* with substance. This substance is in the solid, fluid, aeriform, and ethereal states. In its densest state, it may be supposed to be indefinitely more dense than the heaviest substances known upon earth, and in its rarest state, it may be supposed to be indefinitely more rare than electricity, and between these two extremes, there are probably all intermediates. The universe may thus be regarded as only *one* vast ethereal Body, having in its general mass innumerable points of condensation, which are suns, planets, etc.

Now, the force which originally induced nebulous circles, firmaments, suns, planets, satellites, etc., to assume their respective orbits at specific distances from their primaries, and which perpetually operates (with some modifications, according to different stages of progression) to keep these bodies in those general orbits after they are assumed, may, in a degree, be conceived by the following illustration: The *ponderable* atmosphere of the earth at a level with the sea, is relatively dense, while at the tops of the highest mountains it is relatively rare; and at an altitude of forty-five or fifty miles, according to received estimates, its existence ceases to be appreciable. Hydrogen gas is much lighter than the ponderable terrestrial atmosphere at a level with the sea; and when confined in a balloon, it ascends, with its envelope, to an altitude determined by the degree of buoyancy of gas and balloon united, and there it floats until dissipated. Now, each solar and planetary body in space, is surrounded by a *calorific*, *luminous*, *electric*, and *ethereal* atmosphere, which, in like manner, varies in density and power with the distance from the center of condensation; and, by virtue of the respective super-aerial atmospheres of any two bodies sustaining to each other the relations of primary and secondary, the secondary body assumes an orbitual distance from the primary, which, as in the case of the balloon, is governed by the law of equilibrium—which distance, however, is somewhat modified by centrifugal force.

This illustration of the balloon, however, is very imperfect, and only serves to enable the reader to *approximate* to a conception of the true idea; for we are not to consider any planet or other celestial body, as having the same degree of *affinity* for its primary as the balloon has for the earth, or as being attracted to it in exactly the same way, or as it would be, if there were no greater dissimilarity between its matter and the matter of the primary, than there is between the matter of the balloon and that of the earth. But each celestial body is composed of materials, and possesses calorific, electric, odic, and other forces and properties, and hence *affinities*, peculiar to itself, and which, in general, differ from those of any other given body in proportion to the distance of its natural situation. Moreover, each planet, sun, etc., as before intimated, is only the *condensed center* of a general *ethereal* body of no particularly defined circumference, but whose refined emanations, growing more rare with each remove from their centers, extend indefinitely into space. In this way, each body inter-communicates with, and acts upon, all kindred bodies, and is acted upon by them in return; the action consisting in an interblending of the forces and properties of the different bodies. When this interblending is harmonious, the action is attractive; when it is conflicting, it is repulsive. Beyond certain limits of distance, the interblending actions of any two bodies, however dissimilar in constitution, is always harmonious—and hence attractive; *within* those limits of distance, the action is crowding and conflicting, and hence repellant.

Suppose, then, that by some controlling arm, or some accidental impediment, a planet were suddenly arrested in its orbit, and were thus relieved from the influence of centrifugal force: it would immediately be drawn toward its primary with a force which would uniformly increase as the square of the distance decreased, provided no counteracting force were developed by the approach to the central body. In falling inward, however, although the attractive force would, *for a time*, be increased (that is, until the previous centrifugal displacement was overcome), its elastic atmosphere would begin to crowd more and more upon the elastic atmosphere of the sun, and even its own solidified particles, by the increased calorific, photic, electric, odic, and vital action due to the proximity of the two bodies as centers of such action, would, in themselves, develop an emanative or repellent force in respect to the primary; and, owing to these causes, the secondary body could not approach within a certain distance of its primary, within which distance the repellent force would be *superior* to the attractive.

The same idea is involved in the theory (before propounded) of the process by which secondary bodies were formed from primaries—and which supposes that the secondaries are composed of an equal quantity of *attracted* and *emanated* particles.

As each *individual* of these, acted upon by centrifugal force, finds its equilibrium at the particular point where, by the union of all, the secondary body is formed, so the *united mass* of particles in the body thus formed, has no more tendency to *draw* nearer to the primary than it has to *emanate* further from it.

Suppose, then, any particular secondary body should be violently arrested in its orbit: it would evidently sink into the ethereal atmosphere of its primary a distance measured by its previous centrifugal displacement, which, in most cases, would be considerable; but at some point between its former orbit and the primary, it would attain to an exact equilibrium between the attractive and emanative or repellent influences, and there its inward motion would stop. If held there by violence, and prevented from partaking of the general vortical motion of the system, it would be to the *cosmical* system what a mass of displaced particles, or a splinter of foreign matter, would be to the *human* system; and the effect would be, an inflammation, suppuration, and dissolution, of the part. For, it is evident that in such a case the body would accumulate heat and other repellent elements from the primary, more rapidly than it could relieve itself of them, and sooner or later these accumulations would be beyond its powers of endurance. The particles in that case would separate in detail, and would either be digested and assimilated with the general mass of the primary and its atmosphere, or, assuming the general revolutionary motion of the system, would be again thrown outward by the resultant centrifugal force, and would reaggregate themselves at their original distance, and the planet would be formed anew.

For an explanation of the principles on which all rotatory and orbitual motion may originate, the reader is referred to an earlier stage of this treatise, in which we spoke of the first assumption of rotatory motion in the universal mass: and, by considering the universe still as one general Body, interiorly gravitating and emanating as in the beginning, he may conceive how these motions, not only of the great *general* Body, but of all its included and correspondent *sub*-bodies, is perpetually sustained by a constant supply of the same forces which operated in the beginning, and which constantly inflow from the inexhaustible sources of Divine Spiritual Heat and Light, which mean Love and Wisdom, and which constituted the Alpha and Omega, the first and the last, the beginning and the ending of this grand creative operation! What can be a more natural thought than that the universe is constructed, and that all its functional operations are carried on, according to the foregoing principles! and what hypothesis relating to this grand subject is so free from difficulties!

If the universe is actually constructed on these principles, it manifestly possesses (under the operations of its pervading Divine Life) a self-regulating power which must necessarily give it the utmost conceivable stability—the stability of an almost infinite living Organism, exempted from all external causes of death! Let planets be crowded out of their orbits, if such a thing were possible (which it is not), and they will either spontaneously return again, or new arrangements will be assumed among their associate bodies, which will be according to the law of equilibrium, and equally harmonious with the previous condition. Let planets, or even whole systems, by any imaginable means, be stricken out of existence: there would be an immediate supplying of the vacuum—a healing up of the part—and scarcely a cicatrice would remain. In short, let the system, by some imagined foreign force, be wounded and deranged in almost any conceivable way: it would still contain an internal power of recuperation. But as a Divinely constituted Fabric, destined to unspeakably noble and glorious ends, it is entirely free from all causes of material disturbance, and will live on until its highest purposes are fully attained, when, as one Grand Man, it will change its whole mode of being for one which is more spiritual, more Divine, and inconceivably more glorious!

CHAPTER XI.

PARTICULAR CONSIDERATIONS CONCERNING THE GENESIS AND MODUS OPERANDI OF THE SOLAR SYSTEM.

Little more needs to be said, by way of applying the foregoing principles to the genesis and *modus operandi* of our own Solar System. It has been before intimated that the identical principles are involved here that were concerned in the origin and government of the universe, as a whole, with some modifications in the form of their results, as owing to differences of conditions, and that the seven-fold series is observed in the laws, operations, and successive stages of unfolding, in both instances. In both instances there are the successive and ascending degrees of Chaos, Nucleation, Spheroidation, Circular Agregation, Segregation, Secondary Spheroidation, and the complete and ultimate cosmical unfolding. In both cases the dynamic agents of Heat, Light, and Electricity, with their corresponding triad of odic elements are involved, to which, in both cases, is superadded the all-pervading and controlling Divine Life Principle.

The chief differences in the *specific forms* of developments in the two cases, lies between their fourth, fifth, sixth, and seventh degrees. In the series of developments through which we have supposed the universe, as one whole Body, to have passed, we have supposed the *fourth* development to be that of *nebulous rings*, surrounding the primary spheroid—or, at least, segments of rings so large, and of such various parts, as to preclude the possibility of an aggregation of the materials of either ring or segment, into *one* spheroidal body; while, in the Solar System, the size and other conditions of each of these cycloidal nebulæ were, with apparently one exception, such as to admit of an aggregation into one spheroidal body. The exception here referred to relates to the mass of materials from which originated the asteroids. The *fifth* or *segregative* process in the *universal* development, consists, according to our hypothesis, of the division of each nebulous ring or segment, into a *multitude* of angular and indefinitely formed masses; whereas the fifth and corresponding development in the *Solar* System, consisted (in every case except that of the asteroids, as before mentioned) simply of the breaking up of the nebulous ring, and the assemblage of its parts into *one* body. The processes of the sixth development, both of the Universe and of the Solar System, were perfectly identical, except that in the former case *solar* spheres, and in the latter, the gaseous and incandescent spheres of nascent planets, were the result. The *seventh* development of the universe consisted of the unfolding of the identical forms which were the product of the sixth development of the solar system, viz., the forms of nascent planets, as aforesaid; whereas the *seventh* development of the solar system, consisted of the superficial solidification of those bodies, and such other changes in them as prepared them for the introduction of the first and lowest of the organic forms, by which they were subsequently tenanted.

But although the Universal System and the Solar System thus each consists of a complete octave of developments, each octave has its own particular key-note, which differs from that of the other. That is to say, they do not begin at the same place in the staff, nor does one begin where the other ends.

This, however, does not in any respect destroy the correspondence of the *principles* which both involve.

After the sun and planets were thus formed by agglomerations and condensations of the originally diffused mass of chaotic materials, there would naturally still remain in diffusion through the general sphere of the system, a quantity of mundane matter, so great as to be liable, under the further action of the law of condensation, to ultimately assume forms more or less distinctly visible. This consideration hints at the origin and character of those erratic, and in some cases apparently almost lawless bodies, called *comets.* These are mere *excrescences* upon the system—*incidents* of previous developments; and their anomalas of constitution and motions are probably the results of their borderings upon the extreme confines of the forces and laws provided for the government of the system. Aside from some illustrations of cosmical laws which they afford, they probably subserve no purpose which is much more important than that of the amusement of astronomers.

This idea of residual nebular matter also accounts for that singular nebulous and oblately spheroidal envelope of the sun, which is called the "Zodiacal Light." Probably neither the formation of this nor of the comets, was specifically contemplated in the original plan of the Creator, but the development of each was *incidental* to the uniform operations of established laws.

As originated our own solar system, so we may suppose originated all other solar systems in space, with differences in the *forms* of the operations and results of identical principles, according to differences in material conditions and local circumstances.

CHAPTER XII.

SYNTHETICAL VIEW OF THE ORIGIN OF THE EARTH AND ITS GEOLOGICAL FORMATIONS

THE last developed forms of the universal cosmical structure, viz., the distinctly segregated masses of planetary matter before described, may be viewed in the light of *Seed* of the great Tree of previous Being, and Germs of a future and corresponding creation. By means of a generative influence constantly descending from the Divine Spirit, as the Source of all subordinate existences, a corresponding octave of unfoldings now ensue, which may be called the *geognostic* unfoldings. The successive stages of these, which, like other systems of creation, form a *seven-fold series*, seem, both in the light of *principles* and *facts*, to observe the following order and relations:

PRIMARY TRINITY.	SECONDARY TRINITY.
1. Chaotic or unformed fiery vapor.	**4. The "Transition Period," characterized mainly by aerial developments and changes.**
2. Spheroidal nucleus (liquid and gaseous).	**5. The "Secondary Period," characterized by distinctions of climates and seasons, and their corresponding sedimentary deposits.**
3. Granito-aqueous, or, superficially solidified and oceanic.	**6. The "Tertiary," or, the volcanic, lacustrine, fluvatile, and abrasive Period.**

ULTIMATE.

7. Recent or Alluvial Period.

In our descending or analytical view of creation, we spoke briefly of some of the more superficial characteristics of these terrestrial developments; but we will now glance at the aspects in which they will appear in the light of the *à priori* and *à posteriori* processes of reasoning combined.

1. The Chaotic Stage.—In our analytical and analogical view of the terrestrial system, we found abundant reason to believe that our earth was formed from a mass of primeval fiery vapor, as expressing material conditions *antecedent* to the fiery *liquid* mass, of which, facts prove that our globe once consisted. Following the further and obvious teachings of analogy, as well as the intimations of certain celestial phenomena, we were led to the conclusion that this mass must have been a result of a previous aggregation and segregation of the materials of the solar atmosphere, of which an explanation is involved in the now apparently well-established theory of the formation of the nebulous rings, and their subsequent changes.

It seems to be a well-founded opinion of believers in the nebular theory, that the gaseous cycloid, whose condensation resulted in the formation of the earth, must have originally been nearly of the same shape and circumference with the present orbit of the earth. Now, the earth's orbit is not an exact circle, but an ellipse, with the sun in one of its foci. Consequently, at the separation of the materials of this ring or cycloid at one part of its rim, and their aggregation at the opposite part, whether this occurred at the perihelion or aphelion point—the common mass thus formed must have taken the elongated or ellipsoidal shape, and preserved superficially all the general geometrical properties of the previous circumsolar zone, on a reduced scale.

The first distinct form assumed by the materials of our nascent planet, therefore, must have been that of an ellipsoid, or, perhaps, more properly speaking, that of an egg somewhat flattened in the direction of its shorter diameter. The *two ends* of this ellipsoidal body, preserving, respectively, the general qualities of what were its aphelion and perihelion points when, during its previous and higher state of diffusion, it encircled the sun, must now sustain toward each other the relations of *positive* and *negative*.* The atoms having the strongest affinity for the positive influence, therefore, would naturally flow toward the positive end; and those having the strongest affinity for the negative influence would flow toward the negative end. There would, therefore, be a tendency of the particles to agglomerate and condense in the form of a separate nucleus near *either end* of the general body, or, more accurately speaking, probably in either *focus* of the ellipse. If the particles are sufficiently diverse from each other as to their extreme degrees of positiveness or negativeness, and other circumstances are favorable, the tendencies to agglomeration and condensation at these two points, may result in the formation of a primary planet and a satellite; or, if there are several degrees of matter widely distinguished by their relatively positive and negative qualities, a correspondingly complicated operation of the same principles and forces, may result in the formation of *several* satellites.

The idea of a tendency to, and condensation in, the foci of the egg-shaped nebulous mass, thus forming a primary and a satellite, and that this tendency indicates a *law*, is in precise accordance with, and explains, the fact, universal in the solar system, and doubtless in other departments of the cosmical creation, that when bodies (whether planets or satellites) revolve in *elliptical* orbits, their primaries, or centers of gravity are invariably situated in one of the foci of the ellipse, precisely where, according to our theory, such bodies must, in all probability, have been originally formed. It may be added that, of the fact of this *focality* in the situation of primaries with reference to the elliptic orbits of their secondaries, no other hypothesis than the general one now under consideration affords the slightest explanation.

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* In employing the terms "positive" and "negative," as above, it is not intended to restrict the idea of the polar relations which they express, to a connection with electricity or magnetism. These relations may be supposed, in some sense, to subsist between the two extremes in the development of *each* of the imponderables. Reichenbach, as we have seen, found unmistakable indications of these polar relations existing in the "odic" element, with its different varieties, by him discovered.

Considering the earth and the moon as having, in this way, been formed respectively by condensations in the foci of the same original nebulous mass, their origin and relations may be considered as hinting at, if not exactly representing, the origin and relations of the two bodies of what are called *double stars*, or binary systems. The *diversity of colors* generally observed as characterizing the two constituents of such systems—the larger body being, in most cases, relatively red, and the smaller relatively blue, as though they had divided the prismatic colors between them—strongly intimates, of itself, something like a *polar opposition* in the materials of which they are respectively composed, and gives additional weight to the hypothesis of their original and nebulous connection.

The hypothesis of an original union in one nebulous body of the materials of the earth and moon, seems, indeed, to be necessary, if there is admitted to be *any* truth in the nebular theory. But, if this hypothesis is true, it suggests a connection of a nature heretofore little suspected, as even *now* subsisting between the earth and moon. Taken in connection with our doctrine of constant *emanation*, as well as constant *gravitation*, of particles governed by the laws of assimilation, elimination, and polarization, it encourages, if possible, even more than a suspicion, that the earth and moon are but condensed and oppositely polarized points in one common mass of ethereal, magnetoid, or "odic" substance. Such an ethereal mass, considered as the common calorific, photic, electric, odic, nervoid, and vital sphere or atmosphere of the earth and moon, would seem to be a necessary existence, according to principles involved in the discoveries of Reichenbach; while, on the other hand, and in a still more emphatic sense, the earth and moon in their present state, may be supposed to consist of *precipitated particles* originally held in solution in their now enveloping ethereal and imponderable menstruum.*

This field or realm of segregated ether supporting these now condensed points, may, in its present state, be considered as an ultimate refinement of the primeval nebulous mass from which our world and its satellite had their common origin. Though its ultimate attenuations, intercommingling with those of kindred bodies (yet still preserving their identity) may be supposed to extend indefinitely into space, the relatively dense, or the rationally more obvious, portion of the body, still retains, in all probability, the general shape and size of the original nebula. If we suppose this spheroid of imponderable matter to be rotating on its own proper axis once in twenty-seven days, seven hours, and forty-three minutes, carrying the earth and moon with it as its *condensed foci*, we have, in such supposition, an explanation of the motion of the moon round the earth as it appears to us, and of the motion of the earth around the moon as it would be *mathematically* evident to an inhabitant of the latter body. If this supposition is correct, then neither body ought to move round the other as an absolutely fixed point in the system, but both ought to revolve around a *common center*—the axis of their common ethereal and enveloping mass. But, considering the superior attractive force of the earth over the moon, together with the superior density of that *whole end* of the ethereal mass in which the earth is situated, to that of the end in which the moon is situated, this center of common revolution can probably vary at most but a few hundred miles from the center of the earth, and may be very nearly coincident with it.

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* It is well *known* that particular positions of the moon in respect to the earth, are accompanied with marked effects upon somnambulists, cataleptics, and persons disposed to insanity; and it has from time immemorial been *believed* that certain lunar positions have also a decided influence upon the vegetable and animal kingdoms. During eclipses of the sun, when the moon has been directly between that luminary and the earth, hungry animals have been observed to suddenly cease eating, and become apparently sad and dejected; and when eclipses have been total, birds have sometimes been known to fall dead from their perches. Now, neither of these effects can be supposed to result from any modification of the force of *gravitation* as owing to the relative positions in such cases, of the earth, moon, and sun. But if we suppose, as is supposed above, that the earth and moon are enveloped in a common "odic" sphere of a nervoid and semi-vital character, and that this changes in its polar relations and consequent qualities of influence upon living organisms, with every change of relative position of the earth, moon, and sun, we have an easy solution of the phenomena in question. The supposition of such a change of influence would seem to be countenanced by the results of Reichenbach's experiment with the revolving magnet, before spoken of.

I believe that astronomers are now pretty generally convinced that in binary stellar systems, one body not only revolves around the other, but that the two bodies revolve round a *common center*, situated somewhere between the centers of the two, and nearest to the center of the larger one; and to these motions, those of the *binary* system of the earth and moon would, according to the foregoing hypothesis, present an exact analogy.

The earth, being the *major* or *positive* focal condensation of the general ethereal and enveloping spheroid, has asumed sufficient independence to admit of a diurnal revolution on its own proper axes; but the moon, being the *minor* and *nega* *tive* focus, still continues in subjection to the force of the *general ethereal* mass which is *positive* over it; and therefore, keeping the same side always to the earth, it rotates only with the rotation of the general mass.

If our hypothesis is correct, then not only ought the sides of the moon turned to and from the earth, to be in opposite polar relations, but there should be a slight *elongation* of the moon in the same direction, presenting, in fact, the dwindled and miniature form of the original nebulous or present ethereal spheroid. On the same principle there must have been a tendency to elongation in the form of the earth, while the particles which compose it were in process of aggregation. This tendency, however, so far as the *solid*, or *less mobile* materials of the earth are concerned, was corrected by its *rotation* on its axis, by the perpetual action of which, during the period in which the earth passed from a fluid to a superficially solid state, the surface of the earth was rolled into general rotundity. But the mobility of the *watery* portions of the earth's surface, was such as to preserve, in a degree, their freedom to observe the original tendency to ellipticity, *which tendency is now manifested in the form of tides.* For tides are only elongations of the *mobile* portions of the earth's substance, in what we have supposed to be the direction of the longer axis of the ethereal spheroid, which axis would necessarily be in the direction of the earth and moon, admitting these bodies, as points of condensation in the general body, to occupy generally the two foci of the latter. There are, doubtless, for the same reasons, *atmospheric* tides which are greater than the oceanic tides in proportion to the greater mobility of the atmospheric particles; and had not the earth assumed a rotatory motion (from causes identical with those which produced a similar motion in other bodies, and which have been before explained), it would doubtless have condensed (as we have supposed the moon to have done), in a permanently oval form, whose opposite ends would, if the expression may be allowed, have represented *solidified* tides.*

With the evolutions and condensations above supposed, or, at least, with something not essentially differing from them, the materials of which our earth is composed, may be supposed to have passed out of their first or chaotic state.

2. The SECOND stage of the earth's developments, as obviously the next orderly stage of progression from the first, was that of a *spheroidal igneous nucleus.* This stage, indeed, commenced the moment the nucleus began to appear; for then the general body, by the *distinction* developed in its parts, began to pass out of the state of absolute chaos. It may be considered that this development closed when the outer limits of this igneous nucleus became *distinctly defined*, and when its merely molten and fluid substance became fully distinguished from its gaseous envelope.†

3. The THIRD stage may be denominated the *granito-aqueous*, it being the stage characterized by the formation of the first granite crust, and by the development of the oceans by which the latter was generally covered. This, completing as it did the first Trinity of terrestrial developments, brought the earth from a previously elastic and yielding, to a solid and perma-

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* These suggestions, tending, as they do, to an essential modification of the Newtonian theory of tides, might be greatly fortified by additional considerations; but to present these in their proper force, discussions would be required which would be too occult for a popular treatise.

† The foregoing considerations in respect to the first and second stages of the earth's formation, are admitted to be mainly *à priori*, but to those who can perceive effects as involved in their causes, they will not be without weight. In respect to the remaining stages of development, we will not only have the evidence of *causes*, but of their *effects*, as still *observable* in the earth's crust.

nent state, and thus completed its constitution merely as a *planetary body.*

4. The FOURTH stage was characterized mainly by aerial developments and changes. It embraces that vast period during which the rocks of the Cambrian, Silurian, Old Red Sandstone, and Carboniferous systems were formed. At the commencement of this period, the atmosphere must of necessity have been in an exceedingly crude and impure state. Besides other gross and noxious elements, it must have borne in its bosom all, or nearly all, of the carbonic acid gas which subsequently became condensed in the mountain limestone and various other limestone deposits, and the carbon of which, parting with its oxygen, became embodied in the immense beds of mineral coal, found, more or less, in almost every quarter of the earth. An atmosphere thus surcharged with this noxious vapor, must have been incompatible with the existence of any forms of organic life, except those of a low order; and accordingly we find that the plants and animals of this vast period were, as shown by their fossil remains, exclusively such as inhabited the ocean and the marshy and frequently submerged places in its vicinity—situations intermediate between the properly marine and the properly terrestrial.

It was, doubtless, owing mainly, if not wholly, to atmospheric causes that the solar rays during this period had but little influence upon the surface of the earth, and that a nearly uniform temperature prevailed at all latitudes and at all seasons. Geologists have usually attempted to account for the high degree and general uniformity of this temperature, as indicated by the universally tropical nature of the plants and animals of this period, by referring it to a radiation of the internal heat of the earth, which it is supposed must, at that early period, have been much more intense than in subsequent times. But the mystery seems to be quite as well, if not better, accounted for in the consideration that while the atmosphere was so excessively dense as it must have been while loaded with so much carbon and carbonic acid, *its pressure* must have been correspondingly great; and it is well known that every increase of atmospheric pressure is attended with an increase of heat. It is not improbable, however, that both of these causes had something to do in the production of the superior heat of these times.

The scene which would have been presented to a human spectator, could such an one have been placed upon the surface of the earth at this time, would have been gloomy and cheerless in the extreme. He would probably at no time have beheld either clouds or decided sunshine, but a dim and undefined luminescence, caused by the sunbeams in passing athwart the thick and stagnant atmosphere. No star-beam could have penetrated the dense aerial envelope to relieve the gloom of night; and, for the same reason, the range of horizontal vision, even at noonday, must have been confined within narrow limits. All diversity of landscape must, in the earlier part of this period, have been merged in one wide waste of waters. This, however, was, in later times, partially relieved by extensive districts of low, marshy land, on which the soft and succulent vegetation grew with the rankest luxuriance. No bird yet winged the air, or gladdened the forest with its song; no beast prowled through the thick jungles of fern and sigillaria, and no herds lowed upon the fields of moss and equiseta; and, except the rolling of the ocean waves, the plashing of the finny tribe, and the occasional rumblings of subterranean fires, the most profound and gloomy silence reigned over the face of the globe!

If, therefore, in the first stage of the first Trinity of developments, the whole mass of *terrestrial* materials was in a state that may be designated as chaotic, we find here, in the first stage of the second Trinity, a corresponding condition as relating to the whole mass of *atmospheric* materials, and of its accompanying developments as the initial steps of terrestrial organic creation. Taken as a whole, however, the changes of this period brought conditions on the earth's surface into something like a systematic, or what may be called rudimentally organized, form.

5. The FIFTH development was characterized by distinction of climates as prevailing in different latitudes, and by warm and cold seasons, as owing to the revolution of our planet around the sun; hence, also, by new kinds of geological deposits, and higher degrees of organic life. This development was comprised in the period commencing with the New Red Sandstone, and ending with the close of the Chalk formation.

The records of the general conditions of this period are very distinctly preserved upon the leaves of the rocky book. On the laminæ of the New Red Sandstone rocks in various localities (and especially in the valley of the Connecticut River), are found the distinct footprints of birds of various species. These appear to have been impressed upon the sandy and clayey margin of an ocean at low tide, and to have been covered up by successive thin layers of sand and clay drifted in by the swelling tide. On the same rocks occur marks whose angles and other characteristics clearly prove them to have been made by *frost.* They are in form exactly identical with those which are now produced by frost in the mud upon the borders of a stream. These appear to have been covered over and preserved, in like manner with the tracks, by the detritus swept in by the returning tide. But it is noteworthy that, although these tracks and frost marks occur in abundance above and below each other in the same system of rocks. *the two are never found upon the same lamina*—as though the birds, during the *frosty season*, were entirely absent, having migrated to a *warmer climate*, to return again with the *return of summer.*

On the same strata are also sometimes found impressions which could only have been made by the pattering of rain-drops during the passage of a small shower-cloud; and the forms of these sometimes even infallibly indicate the course in which the *wind* was blowing at the time!

Here, then, is the earliest distinct indication of the prevalence of atmospheric conditions somewhat similar to those which *now* obtain upon the earth's surface. We find, here, unmistakable evidences of summer and winter, warm and cold latitudes, rain, winds, clouds, and sunshine—conditions which clearly could not have existed to any great extent, during any previous period.

Concerning the relics of the olden time, from which these atmospheric and terrestrial conditions are inferred, Professor Hitchcock (to whom the scientific world is much indebted for bringing them to light) remarks: "It is a most interesting thought, that while millions of men, who have striven hard to transmit some trace of their existence to future generations, have sunk into utter oblivion, the simple footsteps of animals that existed thousands, nay, tens of thousands, of years ago, should remain as fresh and distinct as if yesterday impressed, even though nearly every other vestige of their existence has vanished. Nay, still more strange is it, that even the pattering of a shower at that distant period, should have left marks equally distinct, and registered with infallible certainty the direction of the wind."*

* Hitchcock's Geology, p. 155.

The terrestrial animals of this period were almost exclusively oviparous, partaking largely of the sauroidal, or lizard like type, which latter remark is even applicable to the birds. Toward the close of the period, however, an animal appeared which may be regarded as a transition link between the oviparous and viviparous. It was an animal of the class Marsupialia; in other words, an animal with a pouch, like that of the opossum, or kangaroo, in which it sheltered and nourished its young for a season after their birth, the same being yet too feeble and imperfectly developed to endure exposure to the outer elements. It has hence been remarked that, "though the young of this animal were born alive, they were only *half* born, as it were," and needed a kind of supplementary gestation to fit them for life in the external world.

Like the fifth development or member of every other sevenfold series, therefore, *this* is characterized by the assumption of *distinctness*, or partition, in forms and gradations of forms, from a state of previous and comparative *indistinctness*. The *principle* of *segregation* is here distinctly observed, the same as it was in the fifth stage of the *universal* creation. Each one of these forms, being yet transitional and incomplete, is, as it were, a nucleated point in the previously chaotic materials and their involved principles; and therefore the whole development, being the second of the Secondary Trinity, has a certain correspondence to the second of the Primary Trinity, which was characterized by a *nucleation* of the materials of the earth as a whole.

6. The SIXTH stage of the earth's formation was comprised in the whole period commonly termed the Tertiary and Diluvial periods. It commenced immediately after that remarkable marine, terrestrial, and atmospheric change which must

necessarily have accompanied the great Chalk formation, and closed immediately prior to the commencement of the present or Alluvial period. It was distinguished from the previous stage of terrestrial developments, mainly by its lacustrine, volcanic, and fluvatile conditions, and by the erosive, leveling, and harmonizing operations which, especially near the *close* of the period, occurred on the earth's surface. These conditions were evidently an improvement upon previous ones. The earth became more extensively diversified by mountains and valleys, forests, fields, and running streams. The quantity of upland and fertile soil was greatly increased; the atmosphere was freed from previous pestilential vapors; the climates were rendered more salubrious, and all things were more compatible with the existence of higher species in the organic kingdoms. Accordingly, even in the lower strata of this formation, there are found the remains of animals of decidedly mammiferous species. These are of the order *Pachydermata* (thick-skinned), and of comparatively low organization. But as conditions advanced and new strata were deposited, higher species successively made their appearance, organic life all the while assuming more analogy to existing types, until, toward the close of the period, there was, in many instances, an actual shading off into species which now inhabit the earth. This latter remark is equally applicable to the vegetable, as it is to the animal, kingdom.

About the close of this period, there appears to have been a remarkable fall of atmospheric temperature, accompanied by a submergence of the greater portion of land in the northern and temperate regions, in seas filled with floating icebergs. These icebergs, frequently reaching to the bottom of the ocean, have scraped along over the earth's surface, clashed violently against its prominences, torn fragments of rock from their original beds, pushed them along before them, the friction rounding off their angles, and reducing many of them to sand and pebbles. Sometimes large masses of rock would get wedged in between, or thrown upon the tops of, blocks or projections of ice, and would be floated to great distances and scattered over the country. Boulder rocks which must have been transported in some such way, have been identified with rocks "in place" to which they must have originally belonged, from a few hundred yards to several hundred miles to the north of where they were found. Sometimes boulders of great magnitude have been carried over steep and high mountains, and are not unfrequently found lodged upon their summits and scattered over their southern declivities; and the long-continued passage of rocky fragments and detritus transported in this way, has worn scratches, and sometimes deep groves in the mountain rock, all of which have the same general direction, which is nearly north and south—proving that such was the general direction of the current. By this operation, which was evidently long-continued, rugged mountain escarpments were reduced; deep hollows were filled up, and the face of Nature was made to assume fairer proportions. In short, the terrestrial structure being generally completed, this final operation (to illustrate a great thing by a diminutive comparison) seems to have been the *smoothing* and *sand-papering* process to which it was subjected, before being applied to its ultimate and principal use as the habitation of its future tenant, MAN.

This superficial smoothing and rounding of the earth, and its completion as a *habitable globe*, being the third member of the Secondary Trinity of terrestrial developments, manifestly bears a certain correspondence to the third member of the Primary Trinity, or the granito-aqueous development, which brought the earth to completeness, considered merely as a *planetary sphere.*

7. The SEVENTH terrestrial development, which now ensues, is that which is going on at the present time. It is characterized by sedimentary deposits from existing waters, and by the oceanic, terrestrial, and atmospheric changes which are now imperceptibly going on; and its ushering in was accompanied by the introduction of MAN, together with most of the animals and plants of existing species. This, therefore, is the grand culminating point of all terrestrial creations, and brings the seven-fold progressive series to a completion. It is the grand point that was aimed at in the beginning of beginnings, and the great object the accomplishment of which each intermediate movement was intended to subserve; and now that it is attained, the previous conflicts of elements—the clashings of an impetuous nature, as if reaching forward and striving impatiently for the attainment of its final destiny, are lulled into repose. The heavings of the earthquake and the spoutings of subterranean fire through the broken strata which were so devastating in previous ages, have now in a great measure subsided, or occur only in limited districts and at long intervals. Mountain and plain, forest and field, ocean and atmosphere now testify their common satisfaction with the end which has been gloriously achieved; and man, undisturbed, proceeds to beautify and adorn the earth, and, with no other interruptions than such as are due to his own folly, pursues his rounds of progress toward a destiny still more glorious and sublime!

Of course the foregoing remarks in reference to the genesis of the earth, are to be considered only in the light of a *general survey* of the subject to which they relate, and as being intended merely to establish general principles and analogies to be used as aids in discovering or confirming ulterior and corresponding truths. Such being our main object, we have abstained from descriptions of non-essential minutiæ which may be found in the geological books. We have, however, recognized all facts which have any essential bearing on the subject of our speculations, and by the aid of these facts, and of the general laws of causation and analogy which govern them, and necessarily connect them with corresponding antecedents and sequences, we have *inferred* the general nature of those necessary links of the system which are lost to sensuous perception. Hence we have commenced with descriptions of conditions far more primitive than those from which geological writers in general have started, and by the aid of the correspondences existing between one system of developments and another, as exhibited in the law of the seven-fold series, we have endeavored to exhibit the roots of the tree of Geology as growing upon the soil of Astronomy.

If the whole subject, as thus unfolded, exhibits a self-supporting and self-proving consistency, it in no small degree tends to establish the correctness and importance of the method of reasoning from which it receives its support.

CHAPTER XIII.

THE GEOLOGICAL AND MOSAIC REVELATIONS.

One of the first thoughts which strikes the mind as it contemplates the foregoing view of the natural history of our planet is, that the developments spoken of could have been accomplished only in periods too vast for human conception. Admitting that the process of unfolding which finally resulted in bringing our globe to its present habitable and mature state, commenced when its materials were all in a state of diffused igneous gas, it is utterly beyond the power of man to conceive the period which must thence have elapsed before these materials were so far contracted as to admit of the first superficial granitic incrustation. But after these untold myriads of ages had quietly rolled into the depths of the past, sedimentary materials, which, according to statements of Dr. John Pye Smith, as the results of careful measurements, must have had an aggregate thickness of *not less* than twenty miles, took place, for the most part quietly, at the bottom of the ocean. These materials, including the remains of plants and animals of now extinct species, and whole races of which were successively brought into being and swept away, were afterward slowly consolidated into the form of the existing fossillif erous rocks.

As to the number of years or centuries which must have elapsed during this mighty operation, we have the means of making, in our calculations, only a remote and indefinite approximation. During comparatively short periods of violent physical revolution, conglomerates and other coarse and indistinctly stratified rocks may, in some instances, have been deposited with comparative rapidity. Older rocks were probably disintegrated by the combined agency of heat and water, and ground to fragments by volcanic and marine agitation; and, by violent currents, probably thus generated, they may have been carried to lower levels, and sometimes formed thick deposits in comparatively short periods. But these instances are only exceptions to the general rule, while far the greater proportion of the stratified rocks present unmistakable evidence of having been deposited in quiet waters. And these deposits could not, in general, have accumulated much more rapidly than similar ones which are going on at the present time. Now, it is said that the lakes of Scotland shoal, by sedimentary depositions, only at the rate of about six inches in a century.* Making all reasonable allowance for the superior activity of early disintegrating and depositing forces, the period which must have been consumed during the deposition of materials which have formed rocks of twenty miles in perpendicular thickness, can be estimated only by millions of years, especially when we take into account the long periods of super-marine elevation and repose which sometimes must have intervened between the close of one formation and the commencement of the succeeding one.

Our conception of the immensity of the periods of these deposits is augmented when we consider that beds of rocks of great thickness, and sometimes whole mountains, many thousand feet high, are made up almost entirely of sea-shells and other organic matter—these mountains having originally constituted the sea-beds, from which position they were subsequently elevated by subterranean forces. The animals and plants, whose remains are thus preserved, "must have lived and died" (says Professor Hitchcock) "on or near the spot where they are found; while it was only now and then that there was current enough to drift them any considerable distance, or break them into fragments; * * * and frequently all the shells found in a layer of rock, lie in the same position which similar shells now assume upon the bottom of ponds, lakes, and the ocean; that is, with a particular part of the shell uppermost."*

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* Hitchcock's Geology, p. 163.

Nor will we be astonished at these evidences of the high antiquity of our globe, when we consider the immense periods which seem to be consumed in its appointed movements in space. For if there is any dependence to be placed upon the observations and mathematical reasonings of Maedler and others, the whole solar system is rapidly moving around a remote center, in an orbit so vast, that a single revolution can not be accomplished in less than eighteen millions of years! Considering this period as the *annus magnus*, or great year of our planet and the family of orbs to which it belongs, it may have accomplished several of these grand revolutions since it assumed an individual existence, and still be only in the *first years* of its existence—an existence which may continue through as many such revolutions as there are days or hours in the ordinary life of man! In fact, in the development of the plans of an infinite God, who has a whole eternity as his working period, it may emphatically be said, that "a thousand years are but as one day."

But these wonderful deductions from scientific facts have given alarm to many theologians, who have considered them as conflicting with the Mosaic account of creation, as recorded in the first chapter of Genesis. This account has by them been considered as circumscribing the period of creation to six literal days, during which it is supposed, that not only the earth and all it contains, but the sun and planets, if not even the fixed stars, were brought into being. They have hence looked upon the statements and speculations of geologists with disfavor, supposing that their tendency was to undermine the authority of the Bible. The present treatise, therefore, would be incomplete were I pass over entirely unnoticed the question pending between geologists and theologians. This question, however, I can now only consider in brief, exhibiting merely the general aspects of the controversy as they appear to me.

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* Hitchcock's Geology, p. 88, 90; also, Silliman's Appendix to Bakewell's Geology, p. 544.

But before entering directly into the merits of the question, I would premise that all truths must be consistent with each other, whether found in the Bible or in Nature. If, therefore, there is any conflict unmistakably manifest between the teachings of these two authorities, it inevitably follows that one or the other must be untrue; and the untruth is most rationally predicable of that which is most liable to be tinctured by human invention.

Now, the system of creation, though subjective and phenomenal when considered in relation to God, is positive and independent when considered in relation to man. The pages of the rocky book were inscribed by no human amanuensis, and contain none of the whims and errors of perverted human thought. When *correctly interpreted*, therefore, they are to be relied on as infallible, and no theological teachings which contradict them can be considered as the teachings of the same God who wrote those imperishable pages with his own hand. This consideration forces the conclusion, however reluctant we may be to admit it, that that system of theology which can be thrown into a trepidation by the unfolding of a fact in nature, and which, in any case, treats with hostility, or even with disrespect, the positive deductions of science, cannot, thus far, have any counterpart in the mind of that Being who is the Author alike of nature and of heaven, and of the one harmonious system of truth which, in various and corresponding degrees, pervades and constitutes the life and law of all things.

True theology, therefore, has no more favors to ask of true science, than the latter has to ask of the former. Neither one of these, in any case, is alarmed by, but always rejoices in, any additional development in the other, because the two are brothers in affectionate unity, and each one contributes to the other of its own riches and strength, and neither can languish without weakening the other in a corresponding degree.

Some theologians, desirous of maintaining their preconceived interpretations of the first chapter in Genesis, have argued, that since it is possible for God to do all things, it was possible for him, with a single stroke of his omnipotent power, to create the myriads of sea-shells, the impressions of plants, and the skeletons of the higher animals, in their progressive order of superposition, in the rocks, just as we now find them! This might be admitted, if it could first be conceived as possible for God to have had a previous *will* and *purpose* in the generation of forms which, in such a case, would have been, to human conceptions, so *evidently useless;* —and so, with the same qualification, it may be admitted that God *might* have created Herculaneum under the beds of lava, and the Egyptian mummies in their tombs, just as we now find *them:*—but to consider it in the least degree probable that God actually did do either of these things, would be to set all analogy at defiance, and to take an everlasting leave of those guides to truth to which the human mind is largely indebted for all of its substantial progress. If, however, we abstain from such a violation of the *God-established* laws of our rational nature, we must admit in their full force the manifest indications of fossilology and lithology, in reference to the immense periods which must have elapsed during the genesis of our globe, and of the various and successive races of living organisms by which it was tenanted prior to the introduction of man.

Having the utmost confidence in the inherent strength and invulnerability of *true* theology, therefore, we affirm, without any delicacy or evasion, that if the six days of creation, spoken of by Moses, mean only six times twenty-four hours of our time, then the chronology of the stages of creation, as given by him, is manifestly untrue. But with a perfect willingness to find the account, true or untrue, as the case may be, let us examine the account *fearlessly* and without reserve, and endeavor to discover its real import.

In order to do justice in our interpretation of any writer's language, we must, of course, have a due regard to the meaning which context, the nature of the subject, the circumstances, objects, and personal condition, of the writer, and the modes of speech prevalent among the class of writers to which he belongs, conspire to fix upon his language. This rule is so obviously true, that no candid mind will fail to recognize its propriety at once. Now, the book of Genesis (as is the case with other books of the Bible) was written in an age and a country in which *symbolical* language was much in vogue. It also claims, like other sacred books, to have been written by a spiritually illuminated person, and for spiritual purposes;

and, admitting these claims, its peculiar forms of thought and expression must be admitted to have been governed, to some extent, by *spiritual laws;* and according to these same laws, therefore, they must be interpreted. Now, one way, and, in some instances, the only feasible way, of conveying in human language a deep interior idea is, by presenting it in the verbal imagery of some familiar exterior fact, which embraces within itself the *identical principle* which is involved in such interior idea. That this rule was observed in all the parabolic, and much of the prophetic and descriptive language of the Bible, no one who is familiar with the contents of that book can deny.

Now, let it be observed, that if Moses himself, through spiritual or Divine impressions, or any other means, had possessed any adequate idea of the immense periods which Geology proves to have elapsed between the commencement of the creation of our globe and the introduction of man upon its surface, it would have been impossible for him to have conveyed to the unenlightened minds of the semi-barbarians of his age and nation any adequate idea of the actual truth of the case; and any attempt to do this, would only have been productive of misapprehension, and would probably have generated some of the wildest forms of superstition. The probability is, however, that Moses himself had no adequate conception of the immensity of the actual periods of creation; and considering him, according to his claims, as a revelator merely of what was revealed to him, this admission may be made without affecting the truthfulness of the representations which were by him recorded as he himself received them.

These considerations strongly favor the belief, even *à priori*, that *any truthful* record of the natural history of creation made in those days, and especially for spiritual purposes, and by a spiritual teacher, would have been couched in correspondential and spiritual language, by which the principles and spirit of the immense truths more interiorly involved, were brought into a diminished form of embodiment, and thus adapted to the rudimentary intellects to which they were addressed. Now, a "day" involves the *principle* of, and hence spiritually means, *one complete revolution.* But as each complete revolution, whether requiring a long or short period, only involves the *same* principle or spirit, why may not the great revolutions or cycles of operation which comprise the different periods in our earth's physical history be, in spiritual language, called so many days?

That the word "day" is, in the first chapter of Genesis, used in this spiritual sense, without necessarily signifying any thing but the *principle* or *spirit* of a day (or a complete revolution of indefinite duration), is further evident from the manner in which the word is used in many other passages, not only by Moses, but by other sacred writers. Thus we read in Genesis ii. 4, 5, "These are the generations of the heavens and the earth when they were created, in THE DAY that the Lord God made the earth and the heavens, and every plant of the field," etc. Here the six minor revolutions or days are comprised in one grand revolution or day, in the same way as several small circles or periods may be comprehended in one large one. The occurrence of the word "day" in this enlarged sense here, effectually precludes the right of every one to circumscribe its meaning necessarily to a period of twenty-four hours, as it occurs in the previous chapter in reference to the same subject.

Among the numerous other examples of a similar usage of the term "day," which may be found in other portions of the sacred writings, let the following suffice for our present purpose: "And in that *day* there shall be a root of Jesse which shall stand as an ensign of the people; to it shall the Gentiles seek: and his rest shall be glorious. And it shall come to pass in that DAY, that the Lord shall set His hand again a second time to recover the remnant of His people." (Isa. xl. 10, 11.) "And it shall come to pass in that DAY, that the mountains shall drop down new wine, and the hills shall flow with milk." (Joel iii. 18.) And Jesus says, "Abraham rejoiced to see my DAY; and he saw it, and was glad." (John viii. 56.) In neither of these passages is it possible to restrict the meaning of the word "day" to the period of the diurnal revolution of the earth. In *candor*, therefore, it must be acknowledged to be at least extremely probable that the word "day" is used in an equally enlarged and spiritual sense in the equally spiritual language of the first chapter of Genesis—especially as there are so many other facts and circumstances to corroborate such an interpretation.

Considering the six days of creation, then, as expressing six periods of very long duration, let us inquire whether the incidents and characteristics of these periods as described by Moses, bear any similarity to the incidents in the physical history of our globe, as revealed by geological science; and whether the Mosaic classification of periods and operations possesses that evidence of truthfulness which consists in a conformity to the law of the three-fold and seven-fold correspondential series.

In a previous general survey, ranging from the origin to the full maturity of our globe, we have seen that there were seven grand periods or stages in its development, as there are seven stages in the development and compartments in the constitution of all perfect systems. These periods, however, are not throughout exactly coincident with the periods described by Moses, inasmuch as the two descriptions embrace subjects somewhat different. In our general geological survey we have endeavored to unfold the history of the developments of the earth *as* such, speaking of the vegetable and animal creations only incidentally; while the object of Moses appears to have been to speak of the successive organization of those outer forms and conditions with which man is immediately, either sensibly or spiritually, connected. Hence, Moses passes over the first two stages of creation, or the chaotic-gaseous and the nucleated stages, mentioned in our generalization, with the simple and comprehensive remark, that "In the beginning God created the heaven and the earth," and commences his main description at an epoch when the earth was probably in a state of imperfect superficial consolidation, and when much of the water of the ocean was still diffused, as vapor, in the thick and turbid atmosphere. The earth is hence described as at that period "without form and void"—that is, without arrangement, and vacant—"and darkness was upon the face of the deep." This "darkness" may be conceived to have been a natural consequence of the state of the atmosphere, which was probably still so thick as not to be easily distinguishable from the fluid portions of the earth, and from the water which rested upon its surface, in which condition it would, of course, have been completely impervious to the solar rays. The first Divine operation naturally required, therefore, was to produce changes in, and precipitations from, the aqueous portions of the atmosphere, such as would admit of the descent of some degree of solar light to the earth's surface. This operation is described by Moses, in saying, "The Spirit of God moved upon the face of the waters: and God said, Let there be light: and there was light." This, according to the account, constituted the work of the *first day*. And here it may be remarked, once for all, that the phrase, "the evening and the morning," which is used as the standing synonym of the different "days" in this account, seems to stand simply for the beginning and close of the different periods—a use of language similar to that employed by us when we speak of the "eve" or "morn" of a "new era."

It is said, that "God called the light Day, and the darkness He called Night." In this passage, the words "day" and "night" are probably (though not *necessarily*) used in their ordinary acceptation, and point to a revolution of the earth on its axis, and a successive illumination of its sides by the sun. But owing to the thick atmospheric vapors which still continued to prevail to a great extent, the sun would doubtless have still been invisible to a spectator, could such have been placed upon the earth's surface, and the amount of solar light that could have penetrated to the earth, was probably much less than is *now* received, even through the thickest and darkest clouds.

The next work seems to have consisted in producing further changes and regulations in the atmosphere, by which a more distinct line of demarcation was established between the waters intended to be suspended in the air, and those designed to preserve a more condensed form upon the earth's surface. Moses, being obliged to make the most of the few words which his primitive and meager language afforded, describes this work by saying, "And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters." Hebraists tell us that the word "firmament" is a very improper rendering of the original word, which signifies simply an *expanse* or *space;* "Consequently," (says Dr. Clarke) "that circumbient space or expansion, separating the clouds, which are in the higher regions of it, from the seas, etc., which are below it." During the high temperature of the earth's surface, which Geology proves to have prevailed in those early times, there was probably every intermediate gradation between the most dense fluid and the most expanded vapor, the fluid and aeriform substances having no very marked line of distinction. While such was the case, the "circumambient space" supposed, could have had no *distinct* existence. A physical change which established the water, atmosphere, and aqueous vapor and clouds respectively *as such*, was of course the next necessary step in creation's progress; and this is all that appears to be alluded to in the passage before us as constituting the work of the second period or "day."

It was probably during the period comprised within this day, that the transition rocks beneath the coal measures were deposited. These contain the remains of animals and plants of low types, which are almost exclusively marine. But to the creation of these, Moses seems to make no allusion, which fact will not excite particular surprise, when we consider their comparative unimportance to the grand object which he had in view, which was simply to describe how the physical structure and conditions by which man is more *obviously* surrounded, came to exist.

The next work consisted in the partition of land and water (or the elevation of the former), and the development of terrestrial vegetation. "And God said, Let the waters under the heaven be gathered together, and let the dry land appear: and it was so. . . . And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself upon the earth: and it was so." This was the work of the third great period or day, and manifests a surprising agreement with the events of the period of the great Coal Formation. The universal prevalence of almost exclusively *marine*, and the almost total absence of *terrestrial*, fossils in the previously deposited rocks, proves that the ocean, up to this time, covered nearly the whole surface of the earth—which is in exact agreement with the Mosaic record, which implies that the partition of land and water was not made until that period. But large areas of land being then slightly elevated above the level of the waters, these, as another strong corroboration of the record, were covered by a profuse vegetation, which subsequently became converted into the immense beds of mineral coal now found to be so essential to the physical comfort and social progress of the human race.

The next work is spoken of by the sacred cosmogonist in the following terms: "And God said, Let there be lights in the firmament of heaven, to divide the day from the night; and let them be for signs and for seasons, and for days and years. And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so. And God made two great lights: the greater light to rule the day, and the lesser light to rule the night: he made the stars also."

To superficial readers, this passage has seemed exceedingly paradoxical. The supposition that the sun, moon, and stars, had no existence until the comparative atom which forms this earth, had attained to the advanced stage of its development, previously described, is, with any interpretation of the word "day," so unphilosophical and unreasonable as to utterly defy intelligent belief. Criticism, however, has shown that the translation of the passage before us, does injustice to the original, which does not necessarily mean that the heavenly bodies were not *created* until the fourth day. Professor Hitchcock, who is a learned theologian as well as geologist, says, upon this point: "If it be objected that, according to

Moses, the sun, moon, and stars were not created till the fourth day, it may be replied, that a more just interpretation of his language shows his meaning to be, not that the heavenly bodies were created on the fourth day, but that they were then first appointed to serve their present offices; and that they might have been in existence through countless ages."

Admitting such to be the true meaning of the passage, we find, again, that the record marvelously coincides with the indication of geological facts. In our previous survey of the natural history of the globe, we saw conclusive evidence that up to the close of the Coal Period, a nearly uniform temperature prevailed upon the surface of the earth in all latitudes, and that there could have been no distinction of warm and cold seasons. This is evident from the fact, that the rocks of that period, in all latitudes, contain the fossils of plants and animals analogous only to those which *now* flourish between the tropics. It is manifest that such a state of climate could not have been governed, in any great degree, by the rays of the sun, which vary so much as to their intensity, in the different latitudes; and hence, as remarked in our previous generalization, the sun's rays, during the Coal and previous periods, could not yet have penetrated the atmosphere, thick and heavy as it probably was, in such a way as would have rendered that luminary *visible* to a human spectator, had such an one been then placed upon the earth's surface. For the same reason the moon and stars must also, during those periods, have been invisible. Up to that period, therefore, the heavenly bodies could not have ruled the seasons, either as to their temperature or their distinct periodical revolutions; and all the light which could have descended from them to the earth must have been but dim and indistinct.

But in preceding pages it was shown, from the peculiar manner in which the impressions of frost-marks, the tracks of migratory birds, etc., occurred, during the geological formation immediately succeeding the Carboniferous Period (viz., the New Red Sandstone formation), that distinctions of seasons and climates must then clearly have existed, and hence that the sun must then have exerted his direct power upon the earth, which then, as now, varied in its intensity with the different positions assumed by the earth during its orbitual revolution. An atmospheric condition which could thus have admitted of a direct descent of the solar rays, must also have rendered the moon and stars distinctly visible to such of the earth's tenants as had eyes to perceive them; and in these facts we have an abundant verification of the Mosaic record, as to the work of the *fourth day*. It consisted simply in those atmospheric clarifications by which the sun, moon, and stars were *appointed*, or allowed to exercise the office of, ruling the seasons, and dividing time into distinct periods.

The direct rays of the sun being thus admitted to the earth's surface, the latter consequently became habitable to higher orders of living creatures. Accordingly, the next stage of creation's progress is thus described: "And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven. And God created great whales, and every living creature that moveth, which the waters brought forth after their kind, and every winged fowl after his kind." Some of the "moving creatures" here spoken of as introduced into being, were probably wholly aquatic, and others were of the lower orders of air-breathing animals. It is remarkable that the remains of classes of animals here spoken of, first begin to appear in the New Red Sandstone strata, which is the formation next above the carboniferous system, and which must have been succeeded, and measurably accompanied by the clarification of the atmosphere, spoken of as the work of the previous day. For it is in the Red Sandstone stratification that we find the footprints of frogs, tortoises, and *birds*. The latter were mainly, as Professor Hitchcock intimates, of the Grallæ family, or the family of *waders*, and were therefore, with the former, intimately connected with the water, as the Mosaic account implies. There can be but little doubt, therefore, that these birds were the very "fowl" of which Moses speaks.

The other part of the work of this period, according to the common translation, consisted in the creation of "*great whales*," etc. This, admitting our definition of the word "day," forms the only *apparent* discrepancy between geology and the sacred cosmogony; for whales do not appear to have existed before a somewhat advanced stage of the so-called Tertiary Formation, and a very long period after this time. But criticism resolves even this apparent discrepancy into a surprising harmony. Dr. Adam Clarke, who wrote before geology was much cultivated, and hence without the slightest idea of making out a harmony between its teachings and the declarations of Moses, remarks upon the expression in the passage before us: "Though this is generally understood by the different versions as signifying whales, yet the original must be understood, rather as a *general* than a *particular* term, comprising all great aquatic animals." Now the *marine saurians* were "great aquatic animals." These, with amphibious and terrestrial reptiles of enormous size, came in during the deposition of the New Red Sandstone, and extensively characterized the whole so-called Secondary Formation. Thus the Mosaic account of the work of the fifth day, or grand period, is also admirably verified by geological facts.

Animals of the classes just described, both according to Geology and Moses, *preceded* the more perfect land animals, the mammalia, upon the stage of existence. The creation of these latter is said to have constituted the first part of the work of the following, being the sixth day, or period, which is thus spoken of: "And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind: and it was so. And God made the beast of the earth, and the cattle after their kind," etc. The proof of the truth of this portion of the account is found in the remains of the mammalial quadrupeds of the Tertiary Period, in the more recent portions of which we have shown that there was an actual shading off of the animated tribes into the existing species. Moreover, the work of this day, or period, both according to Geology and Moses, was completed by the introduction of *Man* into being, as the grand ultimatum of all the creative efforts. Thence, so far as that great series of unfoldings was concerned, ensued a period of *rest*, and the present is that sabattic period.

The candid reader who has attentively followed me through this investigation, will bear witness that I have made no effort to explain away, or to change the *true* aspect of properly understood *facts*, in order to make out a correspondence between the teaching of science and those of Moses, but that I have labored to simply set forth the facts of the two revelations in their true aspect, leaving them to confirm or refute each other as they might. The coincidence between the two revelations, therefore, which, from generals to particulars, has here appeared so striking, is one for which no human collator is responsible, as it exists independently and unalterably in the absolute facts of the case. All that is required to exhibit one revelation as a substantial transcript of the other, is an admission that the word "day" is used by Moses in the sense of an indefinite period—a sense in which it is used in scores of instances in the Bible, and a sense in which Moses *unquestionably* used it in Gen. ii. 4, where, in a more summary allusion to these same works of creation, he speaks of "THE DAY that the Lord God made the earth and the heavens."

As it is next to an impossibility to suppose that all these surprising coincidences could have been a mere work of chance, the conclusion is scarcely avoidable, that the account in the first chapter of Genesis, by whomsoever written, must have originated in a source of intelligence in which a general knowledge of the whole history of the creation was familiarly embraced.

It is quite certain, however, that Moses KNEW nothing, at least in an exterior way, about Geology; for of this science the whole human race has been ignorant until within the last century. I apprehend that nothing short of an hypothesis of a spiritual or Divine enlightenment, will be found adequate to explain the origin of this biblical and wonderfully accurate account of creation. Concerning the *laws* of such enlightenment, some explanations may be submitted in a future work.

I have deemed it useful to show, in this summary manner, the true bearings of geological science upon the initial revelation of the Bible, partly to correct a tendency which, strange to say, has been manifested in the modern *spiritual* mode of philosophizing, to treat lightly this and other revelations of the Bible, on account of the supposed "*unprogressed*" state of their writers; partly for the purpose of further illustrating the fact, that all true theology and other species of doctrine, whether found in the Bible or elsewhere, must conform to the unavoidable deductions of scientific facts; and partly for the purpose of further unfolding that remarkable law of the three-fold and seven-fold correspondential series, which runs through all complete systems of truth, and of which the Mosaic generalization, properly understood, affords a conspicuous example.

That the seven-fold series of creative operations here spoken of by the sacred writer, exactly conforms to the natural and Divine law of sereal arrangement which we have heretofore unfolded, is obvious from the correspondences between the respective members of its Primary and Secondary Trinities, which will be perceived by an inspection of the following juxtaposed columns, and from the characteristics of the relations which each member of the series, from first to last, exhibits toward the others, which will be found to be the same which the same members in other serieses respectively bear toward their associates.

PRIMARY TRINITY.	SECONDARY TRINITY.
1st Day. Diffused and rudimental *Light*: ("God said, Let there be light.")	4th Day. Definite solar *Light* (by the sun becoming *visible*.)
2nd Day. Atmospneric and terrestrial distinctions, or more definite line of demarcation between condensed and vapory water. ("Firmament.")	5th Day. Higher and first important forms of oceanic, terrestrial, and atmospheric life. ("Great whales" or aquatic monsters — saurians — and "fowls.")
3rd Day. Appearance of dry land; terrestrial vegetation.	6th Day. *Ultimate Tenants* of dry land. (Mammalial quadrupeds and Man.)
7th Day. REST, and Divine habitation in the Ultimate of the creative labor.	

Here the correspondence between the works of the *first* and *fourth* days, or periods, is perceptible at a glance, in that they consisted of *different degrees* of illumination of the earth's surface. The correspondence between the works of the *second* and *fifth* days is obvious, but becomes still more marked by the addition of a few facts which Moses, in his brief survey, left out, but which are supplied by geological science. The *second* day, according to Moses, was characterized by the development of more marked distinctions between earth, water, and atmosphere, expressed by the creation of the "firmament," or the super-terrestrial expanse; while geology shows that the *fifth* day was characterized by the development of a *second degree* of similar distinctions, whereby alternations of climates and seasons, cold and heat, rains, winds, etc., supervened. Moreover, the *fifth* day, according to the biblical account, was characterized by the development of *rudimental land* and *aerial* animals; while, according to geology, the *second* day, after the incipient creation of light, was further occupied by the creation of the *rudimental marine* animals, or the radiata, articulata, mollusca, and fishes of the so-called Transition Formation. The creation of these, Moses passes over in silence, the reason of which may be conceived to consist in their comparative non-importance, and in the fact that in that unintellectual age, they were not, as facts in nature, sufficiently conspicuous to excite general inquiry as to their origin.

Further correspondences are also developed, by the aid of geological science, between the *third* and *sixth* days, but concerning these I need not particularize.

If the reader will now take the trouble to compare the members of this series of creations as described by Moses, with the members of any seven-fold series of creations or operations which we have heretofore described, or which we may describe hereafter, he will find that *each member is to its series what the same member of any other natural seven-fold series is to the* *other members with which it is associated, and that between this and all other serieses there is the same correspondence as there is between any two octaves in music.* It is, be it remembered, upon the fact of this correspondence between the serieses, whether generally or minutely inspected, that we base our conclusion as to the unity of plan which runs through nature, pointing to an origin in the seven-fold and corresponding harmonies of the one Infinite God, who, from His own Essence, has projected, from His own Life animates, and, from His own Wisdom, directs, all things. It is in perfect harmony with this supposition of a Divine originative and controlling Power, that Moses, in the simple and untechnical language of his times, refers the work of each of the successive periods of creation to a *Divine agency*, and not to any force of development inhering in nature as *independent* of God.

I may add, that if there actually is a perfect conformity from generals to particulars, between the principles involved in this seven-fold series of operations mentioned by Moses, and those involved in every other seven-fold natural or spiritual series, whether it be found in science or in the Bible, this fact must be considered as strongly confirming, not to say absolutely demonstrating, our conclusion that there is a *mighty law* here involved, and must go far to convince reasonable skeptics of the truth of, at least, those portions of the Biblical revelation which are found to clearly recognize that law. Yet, from a close inspection of the sacred writings, it will be found that this law is not only expressly recognized in numerous instances, but that it runs through the whole Divine plans of operation, in reference to the human race, of which the Bible gives an historical and prophetic reflex.

CHAPTER XIV.

THE MINERAL KINGDOM; OR, KINGDOM OF CHEMICAL FORMS.

FROM the terrestrial creation, as a whole, we proceed to a brief consideration of the general sub-creations which it involves. The first of these is the MINERAL KINGDOM.

The Mineral Kingdom, in its most enlarged sense, embraces all physical or terrestrial substances, with their various forms and compounds. Being thus general in its range, it is hence a comparatively *indefinite* Kingdom; and it is for this reason, I suppose, that I have experienced more embarrassment in reducing it to distinct classifications, than I have in respect to any other system of being or operation; and, after all, I can only pretend to a comparatively close approximation to correctness in my conclusions. Such an approximation, embracing the *most comprehensive* serial arrangement of physical substances, is that exhibited in the following table:

PRIMARY TRINITY.	SECONDARY TRINITY.
1. Primeval gaseous or mundane chaos.	4. Secondary gaseous or terrestrial atmosphere.
2. Igneous liquid.	5. Segregated, embracing rudimental crystalline forms, both solid and atmospheric.
3. Solidified amorphous	6. Complete material arrangements and ultimate crystalline forms.

7. Governing imponderables

If the reader will carefully inspect this table, he will here find the same harmony of parts, the same correspondence between Primary and Secondary Trinities, the same order of relations, and the same principles of serial association, which he will find in all other natural seven-fold serieses heretofore exhibited, or hereafter to be exhibited.

But a still more specific classification of mineral or physical substances embraces all the simple elements, with their natural compound forms, as known to chemistry—as will be seen by the following table:

PRIMARY TRINITY.	SECONDARY TRINITY
1. Alkalizable and oxidizable *simples* (such as Potassium, sodium, iron, lead, hydrogen, etc.)	4. Lowest *combined* forms (such as alkalies, acids, oxides, sulphurets, carburets, etc.)
2. Acidizable simples (such as sulphur, phosphorus, carbon, etc.)	5. Binary compounds (such as sulphates, carbonates, etc.)
3. Flagrators, or alkalizers, acidifiers, and oxidizers (oxygen and chlorine).	6. Higher and ultimate compounds.

7 Pervading and enveloping electroid, or etheroid unit, as a homogeneous involution and evolution of all forms.

But the Mineral Kingdom, as commonly contemplated, is circumscribed to the realm of crystallized forms, and the amorphous substances from which these immediately proceed. A theory of a septinary arrangement of the Mineral Kingdom, as viewed in this aspect, might be here submitted, but, from not having made crystalography a particular branch of study, I have not sufficient confidence in its conformity to nature, and will therefore omit it. Enough, however, has been said to show that the Mineral Kingdom, in its more general aspect, conforms to the seven-fold serial and correspondential law seen to apply in other cases and nothing is here discovered to mar, but every thing illustrates, the harmony and unity of the great plan of creation. With these remarks, then, we will proceed to consider the Kingdom of forms immediately succeeding the mineral, in the order of development.

CHAPTER XV.

THE VEGETABLE KINGDOM.

The seven-fold constitution of the Vegetable Kingdom as a whole, is illustrated by the seven progressive developments in the growth of a single perfect tree, which consist of 1. The root, or little appendages thrown out from the germ before the stem appears; 2. The simple stem; 3. The branches; 4. The leaves; 5. The flower-buds; 6. The blossoms; and 7. The fruit. The seven corresponding divisions of vegetable forms may be traced as follows:

The *first* and lowest of these consists simply of confused radical fibers, which do not necessarily appear above the surface of the earth. In constitution, this degree of vegetation is but little superior to the finest forms of crystallization, from which it differs principally in respect to its soft and succulent nature, the frequent curvilinear directions of its fibers, and the circular forms of their transverse sections. Of this lowest kind of vegetation, we have examples in the slimy accretions which occur upon the surfaces of rocks, logs, etc., submerged in water; and of which the fibrous underground mould which occurs in warm wet soil, impregnated with rapidly decomposing matter, constitutes the terrestrial representative.

The *second* division of vegetable forms is represented by plants that have a simple stem or shoot projecting above the earth, but no branches nor leaves. Of these, some of the simplest species of sea-weeds afford examples.

The *third* division consists of the *branching* forms of sea plants, of which the *fucoides* afford an example.

The *fourth* division consists of terrestrial herbacea, which are characterized by fully developed leaves. But the lower forms of this general division also embrace lichens, mosses, fungi, etc.

The *fifth* division consists of arborescent cryptogamia, or of those perennial plants in which the organs of fructification are concealed.

The *sixth* division consists of the arborescent monocotyledonous, or of those flowering trees whose seed has but one lobe; and

The *seventh* division consists of the arborescent dicotyledonous, or of those flowering trees whose seeds have two lobes, and which are the most perfect forms of the vegetable kingdom.

This comprehensive classification, though new, is in accordance with the general order of succession in vegetable creations as indicated in fossilology, and is therefore natural. Each one of these divisions, of course, is subject to sub-classifications, which sometimes run parallel with each other; but an *herbaceous* and *arborescent* plant which possess the same number of stamins, pistils, or cotyledons, evidently should not simply on that account, be placed in absolutely the *same* class or order.

That it may the more clearly be perceived that this classification conforms to the serial and correspondential law heretofore unfolded, we will reduce it to the following form:

PRIMARY TRINITY. (*Marine forms.*)	SECONDARY TRINITY (*Terrestrial forms.*)
1. Radical fiber	4. Terrestrial herbacea (*leafing.*)
2. Simple stem	5. Arborescent cryptogamia.
3. Branching.	6. Flowering monocotyledonous.

7. Flowering dicotyledonous.

Here it is seen that the first member of the Primary Trinity, the radical fiber or the root principle, so to speak, of vegetation, has its counterpart and sub-correspondent in the first member of the Secondary Trinity, in the leafing plants—leaves being merely *aerial roots.* The second member of the Primary Trinity, consisting of plants with a simple stem, has its counterpart and sub-correspondent in the second member of the Secondary Trinity—the organs of fructification in the cryptogamous plants being connected with the leaves, and being mere shoots from them as from a root. Considering the cryptogamous plants in the Vegetable Kingdom as a whole, as corresponding to the flower-buds of a single tree, the third member of the Secondary Trinity, showing the *branchings* from the flower-buds, as from a stem, bears a certain correspondence to the third member of the Primary Trinity, embracing merely the *branching* forms of vegetation, The *seventh* member is not only of a more perfect organic structure, but it embraces all the more perfect *fruit-bearing* trees which afford nourishment to higher kingdoms, and therefore it may be considered as the crown of the whole Vegetable Kingdom. It is thus seen that the grand and natural divisions of the Vegetable World, conform to the septenary and ternary serial law; and its complete series will be found, on comparison, to correspond generally and particularly with all other complete series.

CHAPTER XVI.

THE ANIMAL KINGDOM.

The Animal Kingdom follows as next in the order of progression, after the Vegetable Kingdom. Its divisions, in their regular order of ascension from lowest to highest, and also, generally speaking, in respect to their successive periods of development as shown by fossilology, are as follows:

Primary Trinity. (*Marine forms.*)	Secondary Trinity. (*Terrestrial forms.*)
1. Radiata (coral insects, crinoidians, star-fishes, medusiæ, etc.)	4. Reptiles. (The lower forms of this division embrace also the terrestrial mollusca and articulata, such as snails, worms, insects, etc.)
2. Articulata (sea-worms, trilobites, crabs, lobsters, etc.)	5. Birds.
3. Vertebrated Fishes.	6. Mammalia.

7. Man as a *terrestrial* being.

In this table are represented three general divisions of marine forms, and three general divisions of terrestrial forms. The first division of marine forms is to its sphere of existence and to the divisions of marine forms which follow it, what the first division of terrestrial forms is to its sphere of existence, and to the divisions which follow it; and so also the one trine in its sphere corresponds to the other trine in its sphere, both in the complex and in the successive divisions of each.

It may be objected to the foregoing classification, that it leaves out one important division of the animal kingdom, viz., the *Mollusca.* To this it may be replied, that the Mollusca, especially in its lower forms, seem, to be but a higher branch of the Radiata. Some of the lower or univalve shell-fish grow in clusters, or united compartments, almost as one animal, and in this essential characteristic are somewhat allied to the polipiaria, which comprises one class of the Radiata. This quality of growing in clusters or connected compartments, is preserved even by some of the bivalves, such as muscles, oysters, etc. The detached bivalves, having locomotive powers, seem to be an ascension from these; and the still higher orders of mollusca, viz., the gastropoda and cephalopoda, seem to be but higher representations of the same system of creative design, which, as its lowest expression, evolved the polipiaria and crinoids.

I have personally observed that the whilk, which is among the higher orders of shell-fish, propagates through the medium of a zoophitic, or vegetable-like, form, with an attached stem, and containing leaf-like appendages or pods, in which the young are brought to fœtal maturity. The Radiata and Mollusca, therefore, may be considered as comprehended in one general division of the Animal Kingdom, which division, however, should perhaps be designated by some term of more comprehensive significance.

It is thus seen, that the Animal Kingdom conforms to the same serial and correspondential law which we have seen running through all systems of creation previously contemplated, and which we will hereafter perceive runs equally through still higher developments. And with this, as the highest system of material creation, our more *specific* classifications of the grand departments of the universe without us, is completed.

CHAPTER XVII.

THE WHOLE AND ITS PARTS

We have thus ascended, through progressive stages of observation and induction, from the basis to the apex of the grand pyramid of outer creation. From the commanding position to which we have attained, therefore, it is proper to take a general survey of the ground over which we have passed, and to observe any general or particular facts which may thence present themselves, as bearing, favorably or otherwise, upon the conclusions to which we have been led, or as reflecting light upon still ulterior truths.

And first, a remark in reference to the method and order of our previous investigations: It will be remembered that we commenced with the observation of sensible facts, which lie upon the *exteriors* of Nature, and proceeded to trace them analytically to their elements and originative conditions, and those to *theirs*, until we arrived at the primeval and common chaotic Germ from which all things, by different ramifications, sprang. The nature and propriety of the *reverse* process which we thence pursued, with the naturalness of the *order* of successive results to which it led us, may be illustrated as follows:

The astronomer discerns in the distant heavens a faint whitish spot, which he calls a nebula. To the naked eye, it appears dim, indistinct, and undefined. He applies a telescope of moderate power, and the outlines of the same object are a little more defined. With a still larger telescope, it appears still more definite; and so he goes on increasing his optical power, until the same object is resolved into myriads of minute stars, which appear like particles of diamond dust sprinkled upon the blue concave. By another increase of power, these stars are made to exhibit appearances of internal systematic arrangement. This is as far as the most powerful telescopes will go; but suppose that he had the ability to augment his optical power indefinitely; each of those stars, which at first appeared only as a shining point, may soon be made to glow as a resplendent sun, revealing a multitude of planets swimming in the sea of light by which it is surrounded. He now singles out one of those planetary globes as the special object of inspection; and as, by our imagined possibilities, the visual power is enhanced through other successive degrees, the forests, the fields, the streams, the trees, the flowers, and even the insects, which may exist upon the surface of that planet, or the animalcules which sport in its stagnant waters, would successively come into view. Now, be it remarked, that all these successive particularizations, even down to ultimate minutiæ, are involved in that faint luminous spot, which, as a most comprehensive *general*, is first seen by the naked eye in the remote heavens.

Our process of synthetical investigation has been similar to that just supposed, we having the advantage of the actual presence and personal inspection of the minutiæ included in the general subject of our thoughts. With a *mental* telescope we have penetrated, not into the distance of *space*, but into the *corresponding* distance of *time*, and beheld the universe in the aspect of one common nebulous mass. By following the natural history of this one general mass through its successive approximations to our own period, we have seen it successively unfolding solar systems, geological developments, mineral kingdoms, animal kingdoms, and human races, with all things which they respectively include. It is to be observed that each of these successive particularizations is based upon, and was included in, the next preceding general, as all are based upon, and included in, the *all-comprehensive* General.

Moreover, that the *order* in which these particularizations, Kingdoms, or sub-creations have been brought under review, is not an order arbitrarily adopted for our own convenience, but clearly one observed by nature herself, is evident from the fact, that no two systems or Kingdoms, as arranged in our series of inquiries, can be transposed. This illustration of the relations of *generals* and *particulars* also clearly shows, that all truths are but involutions and evolutions of one fundamental truth—hence that all truths must bear certain relations and correspondences to each other, from their origins throughout their successive ramifications, even to their ultimates; and that no truth can be *fully* understood, except in the general and particular light of all others.

Moreover, if the serial order in which the grand divisions of nature, as a whole, have been brought under review, is according to the order of progressive development observed by nature herself, the same is generally true of the serial order of the seven sub-divisions which have been applied to each of these *grand* divisions. By a particular review of either of these classified sub-divisions, the reader will find, for example, that the first member of the series is naturally germinal, and that the seventh is naturally ultimate, to all the others; and that no two members of the series can be transposed without deranging the harmony of the whole series. And though we, of course, claim no absolute exemption from particular errors and imperfections in the classifications which have been sub mitted, it is nevertheless claimed that their manifest *general* conformity to nature, together with their ternary relations and correspondences, involved, after identically the same general method, in each seven-fold series, clearly reveals the presence of a grand structural or associative LAW which, in a corresponding manner, and in different degrees of development, governs the numbers, relations, and succession of parts, in every complete system of natural unfolding. Of this law, as before repeatedly intimated, the diatonic scale in music, with its seven notes, is the natural and oral exponent.

Having thus subjected the grand divisions of nature to review, and discovered the application of this principle of serial and correspondential classification to them all, let us now see whether the connected and successive creations thus brought under review, will naturally fall into the form of *one grand* System, in which our principles of serial arrangement will be exemplified. This may be best exhibited by the following table:

Primary Trinity. (*Structural.*)	Secondary Trinity (*Organic.*)
1. Firmamental and sidereal universe.	4. System of chemical or comprehensive mineralogical arrangements.
2. Solar systems.	5. Vegetable kingdoms
3. Geological developments.	6. Animal kingdoms.

Ultimate.

(*Intellectual.*)

7. Human races, as to their merely *terrestrial* constitutions, affections, and thoughts.

Not only do we observe in this series a natural order of succession of parts, which will not admit of addition, retrenchment, or transposition, but we also observe the same ternary relations and correspondences which we have seen are involved in all the series previously examined. Thus the first member of the series, which is rudimental-*structural*, corresponds to the *fourth* member, which is rudimental-organic;* the second member is the transition-structural, and corresponds to the fifth (the Vegetable Kingdom), which is the transitional-organic; the third member is the (physically) perfect-structural, and corresponds to the sixth, which is the perfect organic. And the seventh is ultimate, exhibiting the perfection and united sublimation of all—in this respect corresponding to the seventh member of every other series, even as the first member in each series corresponds to the first member in all others; the second to the second, etc. The same principles of serial, septinary, and correspondential classification, thus apply equally to the generals and the particulars of nature, at least so far as such particulars have been brought under review.

But while the respective members of each seven-fold series, whether on a high or low scale, including the great series of all serieses, correspond to the same members, as numerically designated in all other serieses, these correspondences are of different degrees of directness and intimacy, according to numerical relations more complicated than those which have yet been brought into view. This, together with the manner in which general and particular serial correspondences are involved in one complete system, may be illustrated partially, but sufficiently for our present purpose, by a reference to the seven prismatic colors and their involved properties. It is found that, by causing each of the seven colors of decomposed light to pass separately through a second prism, they may be still further decomposed, and form a secondary iris, in which each of the seven colors will again be visible. Now the first or *general* iris represents the great System of systems, considered as *one*, while each included iris represents one of the sub-systems involved in the latter, and which is also seven-fold. In other words, the grand seven-fold System of nature is composed of all its included and subordinate seven-fold systems, in the same way as the grand iris is composed of all the elements involved in its included irises, there being in either case a similar interdependence of parts; and hence there is the same unity in the System as a *whole*, that there is in each one of its analogous and component sub-systems. The grand System of nature, and each one of its sub-systems, then, correspond to each other in the same way as the grand iris, and each of its included sub-irises correspond to each other, according to their similar numerical designations. But while this is the case with the iris and its included sub-irises, it is evident that one of these latter, based, for example, upon the general *red* ray, would bear a *different degree* of correspondence to other seven-fold divisions of color, from one that is based generally upon the *yellow*, *blue*, or any other ray; and the same is true of the great System of nature and its sub-systems.

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* A crystal possesses a kind of molecular life, and has different parts, angles, and *poles*, which perform different functions, as shown by Reichenbach; it may therefore be considered as an *organism*, though of the lowest kind.

It was before shown that each seven-fold system of nature is accompanied, in its development and functional operations, by seven corresponding dynamic agents, and also seven corresponding laws. It may therefore be said that these dynamic agents and laws are also, either identically or by their natural representatives in different degrees of ascension, subject to the same *comprehensive* and *involved* classifications which we have just seen to apply to their corresponding outer developments, as presented in the universal Fabric of Being and its parts. It would, indeed, be difficult to get a set of terms sufficiently comprehensive, and yet sufficiently definite, to apply equally to all systems and sub-systems involved in a universal classification; but if the reader will consider the terms we may employ as being themselves *correspondential*, and as expressive merely of *general principles*, he may find the general and particular systems of nature, in their three-fold relations of Dynamic Agents, Laws, and Developments, represented, with approximate truthfulness, in the following table:

DYNAMIC AGENTS.	LAWS.	DEVELOPMENTS.
1. Heat.	Expansion.	Chaos.
2. Light.	Attraction.	Nuclei.
3. Electricity.	Circulation.	Forms.
4. Organic, or odic heat.	Aggregation.	Incipient organism
5. Odic light.	Segregation.	Ascended organic forms.
6. Odic aura.	Sympathy.	Universal association.
7. Vitality.	Life.	Unity of totality.

Applying the *fundamental principles* of this classification, in different degrees, to the universal system, and to all its sub-systems, we have here a representation of the connection and harmonial relations of the Whole with the parts, and the parts with the Whole, of the Macrocosm or the universe without—corresponding to the connections and relations of the parts and the whole, of the Microcosm, or the universe within. Here then, is erected, "without the noise of the hammer," that universal Temple before spoken of, whose timbers, hewn by God's own hand, consist of all those *facts* and *principles* which lie in the Realm of Being without us, and which mere *analytical* science necessarily views in everlasting isolation and confusion.

CHAPTER XVIII.

DUALISM OF PRODUCTIVE FORCES; OR, THE DIASTOLE AND SYSTOLE OF NATURE.

FOLLOWING link by link the descending chain of analogy, the conclusion was before arrived at, that in the beginning, the materials of the universe consisted of one diffuse, chaotic, or gaseous mass, without distinction of parts, or definite internal motions. Reasons were also submitted for believing that these material conditions were not eternal, but that they originated as emanations or projections of the more exterior essences of the Divine Personal Constitution. It was shown that, inasmuch as this whole mass of *physical* substance thus originated from Divine *spiritual* substance, so *physical Heat* in this substance originated from Divine *spiritual* Heat, which is Love, and that physical Light originated from Divine spiritual Light, which is Wisdom. It was also shown that Heat is accompanied with a force or law of Expansion; and that from Heat and Light combined, originated the force or law of Attraction or Contraction. As Divine Love and Wisdom (forming a Duality, or productive unity, consisting of positive or negative, or male and female Principles) constitute the spiritual Alpha and Omega of all generative forces, so it is apprehended that their physical counterparts, consisting of the forces of Expansion and Attraction, may be found to maintain an equally fundamental relation to all modifications of force, law, and operation, existing in the realm of created Being.

If we again glance at the systems and sub-systems of operation which nature presents, we will find abundant exemplifications of this fact. Thus, as the forces of Expansion and Contraction proceeded in their operations in the primeval chaotic mass, the particles which were by nature fitted to remain in an *aeriform* or *ethereal* state, and those which were naturally fitted for aggregation into *dense* forms, were separated. The latter class of particles, by a general assemblage, first formed the universal nucleus, and then, successively the nebulous rings, segregated masses, and stellar and planetary systems. The telescope now reveals these masses of condensible materials apparently in all stages of progress in the heavens, from the indefinitely formed and irresolvable nebula to the globular cluster of stars. This latter is the form peculiar to the highest possible degree of cosmical perfection, and, at the same time, the highest natural degree of cosmical *condensation;* and it may hence be supposed to be accompanied with the highest naturally attainable degree of levity and purity in the circumambient ether. But these states are ultimate achievements of the joint and constant action of the fundamental laws of Expansion and Contraction.

We will find, on due consideration, that these same principles apply also to each creation *included in* the cosmical, whether it be organic or inorganic. Thus, in the Mineral World, the metallic ore that is now segregated into distinct veins, evidently must have originally existed in *diffusion* in the surrounding rock. The particles which *originally* occupied the present position of the mineral veins, must have been dispersed by a force of expansion (virtually or actually) which was precisely equivalent to the force of mutual attraction which brought the metalline particles together in their place. The same tendency of kindred and originally diffused mineral par ticles to draw together into the form of dense masses, is, perhaps, still more forcibly illustrated by the flint nodules found in beds of chalk, and which are generally of a more or less rounded form, evidently indicating an original state of *solution* in the surrounding mass, from which they have become *condensed*, as they are now found.

The first forms assumed by the *vegetable* materials that exist in the world, were also diffuse and chaotic. Such were the marine accretions of germinal slime, with their radical fibers, and subsequent efflorescent, simple, and microscopic stems. Several gradations of plants as they rise above these, are still of imperfect exterior forms, of a loose and succulent nature, and of an internal structure entirely cellular—indicating, as yet, but small progress in the condensive principle. In these, however, the whole Vegetable Kingdom as *one* creation, has its incipient and rudimental development. Further segregations and condensations of the vegetative elements are decidedly manifested in the subsequently formed *terrestrial* plants possessing a *vascular* tissue and ligneous fiber. But as creation proceeds, still higher forms, possessing more marked and widely diversified characteristics, are gradually developed, until the flowering and dicotyledonous plants of the present era came into being; and these show the closest possible connection of congenial, and the most perfect elimination of heterogeneal vegetable elements. Hence, they exhibit the ultimate degree of the *Condensive* and *Expansive* principle which can be naturally applied to the Vegetable Kingdom.

In the Animal Kingdom, including the human, the same principles are distinctly operative; and this, too, both with reference to the individual organism, and the whole collection of living beings. Professor Agassiz, who has investigated the subject of embryology perhaps more thoroughly than any other man, tells us, that after the fecundation of the ovum of any animal, and its division into cells and layers, the organ of circulation proceeds to its incipient development from the *middle* layer of the germ. "First," the blood appears by a simple process of liquefaction of the cells. It can be seen under the microscope how the particles, or the cells of that layer, begin to loose at the outer margin, and to move between themselves, and to run in particular directions, and to combine into currents, and those currents to assume particular directions, *before there is a heart*, *and before there are blood-vessels.* It can be seen in every chicken under so low a magnifying power, that no one should lose the opportunity of seeing this wonderful sight. When blood corpuscules *move from the center toward the margin of the germ* [Expansion], the other cells, which become loose in the periphery of the germ, begin to *move toward the center* [Contraction]. In the beginning, there being no current circulating, the two collections of fluid meet, and finally become regular currents, by means of channels through which the blood runs for a regular *circulation.**

These fundamental, expansive, contractive, and circulatory motions are subsidiary to the development of a *fourth* operation, by which affinitized particles floating in the circulating menstruum are brought into conjunction, and deposited in the form of solid tissues. They are at first aggregated on all sides of the circulating channels, and form the blood-vessels, the ramifications of which (says Agassiz) are at first constantly changing. But one portion of the central vessel soon becomes enlarged, and assumes the form of a simple elongated sack. This, centralizing and expressing in itself the *previously diffused expansive* and *contractile* forces, performs a constant succession of diastolic and systolic motions, and constitutes the rudiment of the future heart.

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* Agassiz's Lectures on Comparative Embryology. Here we have, in the words of one who wrote without any view to the distinctive philosophy of the present treatise, an illustration of the successive origins of the laws of Expansion, Contraction, and Circulation. Considering these facts and principles as equally applicable, on a large scale, to the great fecundated germ or *ovum* of the cosmical creation, it will illustrate perfectly the incipient process by a prolongation of which the universe received its present mature form.

Other processions from the blood-vessels form, in like manner, the rudiments of the alimentary canal, the liver, the lungs, the brain, etc. These, by a constant rejection (through the expansive or emanative force) of particles foreign to their respective and appropriate composition, and as constant an attraction and appropriation of the particles which they need, finally arrive at the full maturity of their complex structures, and together, form the complete living organism. The complete organism, therefore, manifests the perfection of elimination of unsuitable substances from each particular organ (which substances, therefore, go to form other organs to which they *are* suitable), and the perfection of condensation or aggregation in each organ of those substances which are suitable to its own composition.

The same remarks are, in *principle*, applicable to the whole animated creation as to *one grand* Form. Its first and lowest development, as shown by fossilology, consisted of polypiaria and other radiated forms. Now, the polypi of a coral reef may almost be considered as one extended animal, with little distinction of parts. The substances and functions of heart, stomach, lungs, brain, etc., seem to be interdiffused and confounded with each other in such a way that one portion of the structure is no more vital than another, and therefore, into however numerous or small fragments this animal substance may become divided or subdivided, each fragment, still chaotically embodying in itself *all* the principles of vitality and organization, continues to live and grow as a distinct animal. It, therefore, corresponds to the primitive cellular structure of the impregnated ova of the higher animals. In the higher forms of the Radiata, the organs, with their functional operations, are perceptibly more distinct from each other. In the Articulata, there is still more definite association of the elements of organs into their distinct and appropriate forms; but this association is still so imperfect, that if the lobster or crab, for example, loses a claw, it eliminates from other portions of its system elements which form another claw—thus showing that the claw-principle, so to speak, previously existed undeveloped, in the other parts of the organism, by a draft upon which the recuperation is now produced. And so in each succeeding class in the ascending scale of animal creations, heart becomes more distinctly heart, brain becomes more distinctly brain, and all the other organs become correspondingly more distinct and highly developed, and more free from those particles which properly belong to other organs, until the perfection of living organization is attained in the perfected *human* form, which may be considered as the whole Animal Kingdom in the aggregate, with something more besides.

And so, reducing these specific subjects of contemplation to one comprehensive view, it may be said, that in the beginning the *material* elements of man, animal, vegetable, mineral, planet, sun, and firmament, existed in common interdiffusion in the great, universal, and undistinguishable mass of nebulous matter, in such a way that each part was lost in all other parts. The great mass, then, formed, as it were, one grand Polypus, or one grand ovum, corresponding to the ovum of an animal, and from it, after fecundation, and by means of a constant incubative and superior influence, the ultimate development of the complex system in its mature form, was to arise. Materials in the primitive and lowest degree of refinement, draw together according to rudimental affinities, at the same time evolving their uncondensible elements, and thus form vast and indefinite nebulous aggregation, with their circumambient ether. Further evolutions and condensations, and consequent refinements, form, successively, firmaments, suns, planets, mineral aggregations, plants, animals, and finally the bodies of human beings—all of which, from first to last, have directly or indirectly collected and selected their materials from the great mass of *all* materials, even as the nodules of flint, before spoken of as embodied in the strata of chalk, have collected their component silicious particles from the mass of surrounding materials in which they must have been originally diffused!

The fact that, in the process of all formations, there is an expansion and evolution of uncondensible elements from the centers of their chaotic materials, as well as a clustering around central nuclei, of those particles capable of constituting the tangible structure with its various parts, more fully illustrates the doctrine heretofore advanced, that all forms and organisms, from stellar assemblages, individual suns, and planets, to crystals, vegetables, animals, and human beings, are surrounded by an *aromal counterpart* or "sphere." It will be borne in mind, that it is by the inter-action of these aromal counter parts, or spheres of different forms and organisms (and which are always expressive of the specific interior qualities of the latter), that these forms and organisms are brought into what may be called "*magnetic sympathy*" with each other; and it is by the combined aromal spheres of all organisms, forms, and systems, that the great inter-active nerve-aura of the universe, as *one* Body, is made up.

The expansions and emanations *from* centers perpetually prevalent throughout the whole domain of forms and organisms, may be considered as one general *diastole;* while the contractions and precipitations *upon* centers, likewise universally prevalent, may be considered as one general *systole;* and these motions, in their more progressed and periodically *alternating* forms, are expressed in the secular expansions and contractions of planetary orbits; in the oscillations of heavenly bodies between their aphelion and perihelion points; in the ebbing and flowing of tides; in the inspirations and expirations of plants; in the dilations and contractions of the human heart; and in the breathings and pulsations of microscopic forms of life, which sport in a single drop of water.

In attributing thus much to the laws of Expansion and Contraction (or Attraction), it is not by any means intended to supersede the septinary divisions of laws, as presented in preceding pages. Our object has rather been to show that these two *fundamental* laws, being, as it were, male and female in conjugal unity, are the parents and grandparents of all other laws. Thus it is from a combination of Expansive and Contractive movements that the law of *Circulation* immediately ensues in every portion of the creation, even as the same ensues in the animal and human systems, from the expansive and contractile motions of the heart: and as particles are thus made to flow throughout each system, and are placed in general intercommunication with other particles, there is occasion given to the operation of the *fourth* law, by which mutually affinitized particles, whether in organic or inorganic creations, unite together and form the tissues of the permanent physical structure. Thence, after performing their appropriate offices, and undergoing specific refinements, they are taken up and re-deposited in higher and more complex masses or tissues, or excreted entirely from the system, according to the fifth law—the law of *segregation*—the same being also applicable, in different degrees, to each creation; then by mutual impartations of essences and forces between these masses or tissues, as necessary parts or organs of the system, a *sixth* law is developed—the law of universal sympathy and harmonial reciprocation. Finally, all these laws and operations, harmoniously combined, give occasion to the normal manifestation of the *seventh* and highest law—the law governing the functions of the complex unity, and in which the principles of Love and Wisdom, Heat and Light, Expansion and Attraction, with all their modifications and subordinates, are embraced in unitary form.

As these Expansive and Attractive operations are dependent upon physical Heat and Light, and these are ultimately dependent for their generation upon *spiritual* Heat and Light, which are conditions of Divine Love and Wisdom, so it follows that Divine Love and Wisdom pervade nature co-extensively with Expansive and Attractive forces, and are the fundamental and essential constituents of the life-principle which inheres in every form of being. Things live, therefore, only in proportion to the degree in which they are recipients of the essences and forms of Divine Love and Wisdom; and without these, all things would be dead.

CHAPTER XIX.

CIRCLES.

It was before shown that the constant Expansive and Contractive forces, particularly illustrated in the previous chapter, call into requisition the law of *Circulation*, which gives *form* to the motion of particles impelled by the previous forces. By circulation is meant a proceeding from a given point or condition, and finally returning to the same, whether the line of progression described by the movement is mathematically that of an exact circle or not; as is illustrated by the flowing of blood from the heart, through various channels back again to the heart.

But it is here to be particularly observed that the blood, in passing from the heart, through various parts of the system back again to the heart, deposits certain portions of its elements in various fleshy and osseous tissues along its path. This example, taken from the functional operations of the *Microcosm*, or little universe, serves as a sure index of similar operations which occur in the various departments of the *Macrocosm*, or great universe, and leads to the remark, that all regularly circulating materials, whether in the human, the animal, the vegetable, the mineral, the geognostic, or the astronomical department of creation, impart certain of their elements to the ambient spaces through which they pass. It is by the aggregation of such imparted elements that all regularly developed forms in nature have their being; and as it was heretofore shown that all natural movements and developments observe a regular serial order of successive gradations, it follows, from the law of Circulation, that this serial order, as applicable to each system or degree of nature, must exemplify the *circle.* This idea of the universality of the circular constitution and movements of things, shall now be more particularly illustrated by facts.

Extending our observations to the heavenly bodies, we see *circular motion* everywhere prevailing. Satellites move around planets, planets around suns, suns around still greater suns, and an extension of the analogical chain renders it, as before shown, extremely probable, not to say certain, that all secondary bodies in universal space, revolve in common, around one grand primitive Center and Source of attraction. If this be the case, then, whatever particular movements the secondary bodies may have assumed from the development of *forms* of internal forces peculiar to themselves, these movements are subordinate to the great material Source of movement, and the forces by which they occur are only reproductions or ascensions, in specific and modified forms, of the forces which primarily appertain to *it.*

But as the forces producing these primitive rotatory and orbitual motions in the universe, are the final source of all those diversified ramifications of circular movement, which are manifested by subordinate systems, suns, and planets, so the orbitual and rotatory motions of planets are the more immediate parents and dependencies of still more diversified and minute systems of circular development. From the orbitual motion of the earth, for instance (and the fact also applies to other planets), results a continually repeated *circle* of *thermal changes,* which mark the various seasons of the year. These give rise to the various annual series of vegetable and other developments. In the genial heat of spring, the seed that has sunk into the moist vegetable mould, expands and puts forth successively the stem, the branches, the leaves, the flower-buds, the flowers, and the fruit containing seed of the same species of that from which the plant sprang. Then, as the frosts of winter begin again to prevail, the life of the plant becomes extinct; its ripened seeds are scattered upon the ground, to become the progenitors of other plants of the same kind, and the materials of the plant also sink to the earth to replenish the vegetable mould from which they sprang. Thus the same general condition is again brought about with that from which the first plant sprang; and the germination, growth, maturity, and decay of the plant, with the scattering of its seed upon the earth, exemplifies a complete *circle.* So with the putting forth of the foliage, the development of the blossoms and fruit, and the final hibernation of *arborescent* vegetation.

Coincident, also, with the changes of the seasons, are the periodical awakenings of certain animal instincts, and also the occurrence of certain conditions in the human, physical, and mental economy. These changes, occurring, as they do, in regular serial succession, and always returning to the point from which they started, exemplify, also, the Circle.

And so, from the alternations of day and night, which, with their successive hours and moments, mark a diurnal circle of physical changes, still more minute circles of change ensue, in the economy of organic beings. Such are the circles of wakefulness and sleep; of activity and repose; of organic waste and recuperation, with all their intermediate and transitional stages, whether we apply the remark to the vegetable, the animal, or the human creation. And it may even be said that every passage, from one degree or stage to another, in the progress of any complete circle of unfoldings, involves a circle or system of a minuter kind, until we get down to the physiological functions of the organism of an ephemeron, to the circuit of blood and organic deposits in the system of an anamalcule, or to the orbitual and axial revolutions of an atom.

It may also be said that the progression from the origin to the dissolution of any system, or to its passage into another form, involves the circle; and this is equally true of the universe as a whole, of its included stellar and solar systems and individual worlds, and of the further ramifications of creation, constituting the mineral, vegetable, animal, and human kingdoms, together with their various genera, species, and individual forms, respectively.

The minutest of these circles of movement and develop ment, are included in, and are, in some sense, dependent upon, the greater, and those are in like manner included in and dependent upon, still greater (which, therefore, form circles of circles), and all are included in the *great* Circle which comprehends all movements and developments in the universe, from its periphery to its center, from the whole unimaginable vortex of being to a single atom of matter, and from the very origin to the very end of all material things.

The close of each comprehensive circle of operations marks an era, not only in its own history, but also in the history of its included circles, which are, to some extent, dependent upon *its* state for their own specific states. For illustration, the earth, during a single orbitual revolution, makes, to sense, three hundred and sixty-five revolutions on its own axis, occasioning the same number of repetitions of the phenomena of day and night. But these days and nights, or circles of diurnal change, vary as to their length, temperature, etc., with the different stages of progress which are attained in the *annual* circle of revolution. But, if the reasonings of Maedler and others are to be relied upon, the whole Solar System, including the earth, is sweeping round a grand common center, which is so distant, that a single orbitual revolution can not probably be accomplished in a less period than eighteen millions of years. As such a revolution will constitute the *great year* of the solar system, it is extremely probable that the progress of this revolution will be marked with changes in ethereal elements which affect climate and the various circles of organic creation upon our globe, in a manner analogous to the influence of the orbitual revolution of the earth, upon the length and other characteristics of the days and nights, and thence, also, upon the annual developments in the vegetable and animal kingdoms. This gradual alteration of the position of the Solar System in the sidereal spaces, and the elemental changes consequent thereupon, may of itself be sufficient in the course of time to work an entire change in the character of organic life upon our globe; and still mightier changes in still mightier periods of time, may be wrought in the whole aspect of creation, physical and moral, by those inconceivably more stupendous revolutions to which all of these are subordinate.* It is by the combined influences of all other circles of movement and creation, that each particular circle is precisely *what it is;* and whenever there is any change in the functional operations of any portion of the grand system of Being, or of any of its sub-systems, physical, mental, or moral, there is, according to the law of sympathy, necessarily some co-related change in all circles of operation included in this, however inappreciable to human conceptions that change may be.

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* Professor Nichol has suggested the idea that the marked changes of climate, and hence of the organic and other productions of the earth, which occurred during the geological periods, may not have been entirely disconnected with the movements of the solar system through the stellar spaces. (See Nichol's "Architecture of the Heavens.")

Thus do we see that the great system of universal Nature, from its most comprehensive outlines as a whole, down to its infinitessimal parts, is one compact system of co-related "wheels within wheels," which play harmoniously together, as the various and mutually dependent parts of a most sublime and magnificent Machine! It is a machine, however, which, notwithstanding its perfection *as* a machine, is neither absolutely self-propelling, nor can it evolve its appropriate fabrics, and thus fulfill the designs of its Maker, without the constant and intelligent superintendence of a superior Power—even the Power from which *it* received *its* origin—as has before been intimated, and will be more particularly illustrated hereafter.

The general and particular *numbers* of progressive gradations which extend from beginnings to endings, and thus constitute each known circle of developments, or each known form of a perfect series, that is inwoven with all others in the texture of nature, have heretofore been maintained to be THREE and SEVEN. The reasons for considering these as the numbers of perfection applicable to every complete system of being, have been extensively illustrated in foregoing pages, and need not be repeated in this place.

CHAPTER XX.

THE DOCTRINE OF DEGREES.

The exposition of the *serial* and *circular* order of nature's operations and constituent parts, as given in the foregoing chapter, prepares us for the more full comprehension of another doctrine, which is of no less importance than the previous one. I refer to the truth that each complete system of creation and operation, from greatest to smallest, together with the whole realm of being as *one* System, is resolvable into distinct *Degrees*, associated with each other according to a certain definite order —and that each complete System as one *comprehensive* Degree, is connected, after the same general order, with the one immediately beneath, and that immediately above it, in the general scale. This doctrine of Degrees has been constantly intimated in foregoing discussions; but its importance as a general guide to truth, demands for it a more direct and particular illustration, which shall now be given.

The writer's theory of Degrees was formed mainly from a direct study of nature, and with but little immediate aid from human suggestions beyond what was contained in the mere *word* "Degrees," as applied to nature's unfoldings; but when on the point of placing the present work, containing a chapter on this subject, in the hands of the printers, my attention was called by a friend to the teachings of Emanuel Swedenborg on the same subject. So far as I understand what that celebrated philosopher has written upon this theme, I am delighted in being able to recognize it not only as entirely true, but highly interesting and important; at the same time that I find in it a confirmation of the *principles* involved in my previous thoughts upon the same subject. This, however, is said without the intention to intimate any opinion as to the truthfulness or untruthfulness of the general writings of Swedenborg, concerning which, indeed, I know comparatively little.

The doctrine of Swedenborg concerning Degrees, is essentially similar to that which I had conceived, the main difference, aside from his peculiar terminology, consisting in his exclusive use of the *ternary* division, whereas I, as a general rule, use the *septinary*, as *involving* the ternary. In Swedenborg's writings, however, I find many features and applications of this doctrine of which I had not before conceived; while, in my own previously embodied thoughts upon this subject, there were ideas which I have *not yet* found in Swedenborg. I am, therefore, induced to so far modify the chapter I had written on this subject, as to give a general reflex of what is essential and fundamental in both forms of the conception, in doing which I shall so far change my own previously adopted terminology, as to avoid a confounding of ideas essentially different, as originating with the Swedish philosopher and myself.

Swedenborg makes Degrees of two kinds, viz., continuous Degrees, or Degrees of latitude, and discreet Degrees, or Degrees of altitude. Continuous Degrees, or Degrees of latitude, are described as being "like degrees from light to shade, from heat to cold, from hard to soft, from gross to subtle, etc." But Discreet Degrees are described as "entirely different" from these, in that "they are in the relation of prior, posterior, and postreme, or of end, cause, and effect. They are called Discreet Degrees," continues the writer, "because the prior is by itself, the posterior by itself, and the postreme by itself; but still, taken together, they make a one."

Further illustrations of the same subject are given as follows: "It is well known by ocular experience, that each muscle in the human body consists of very minute fibers, and that these fasciculated, constitute those larger ones, called moving fibers, and that bundles of these produce the compound which is called a muscle. It is the same with the nerves: very small nervous fibers are put together into larger ones, which appear like filaments, and by a collection of such filaments the nerve is produced. It is also the same in the other compaginations, confasciculations, and collections of which the organs and viscera consist; for these are compounds of fibers and vessels, variously fashioned by similar degrees. The case is the same also with all and every thing of the Vegetable Kingdom, and with all and every thing of the Mineral Kingdom; in wood there is a compagination of filaments in three-fold order; in metals and stones there is a conglobation of parts also in three-fold order. These considerations show the nature of Discreet Degrees, namely, that one is formed from another, and by means of the second, a third, or composite; and that each Degree is discreet from another."

Inasmuch as the second Degree in any trine, proceeds from the first, and the third from the second, it was also taught by Swedenborg, that "the first Degree is all in all in the subsequent degrees;" and that "the ultimate Degree is the complex, continent, and basis, of the prior Degrees;" by which latter phrase I understand to be meant, that in the ultimate Degree, all the Degrees receive permanent, potential, and utilized embodiment.

This doctrine of Degrees is extended by Swedenborg to every department of existence, whether in the physical, moral, civil, psychological or spiritual worlds, and even to the infinite Divine Constitution itself, of which they are the outbirths and correspondences. He, indeed, maintains that all and every thing in each form of being, from greatest to smallest, of which triunity may be predicated, contains Degrees both continuous and discreet. He maintains that the knowledge of Discreet Degrees is of the greatest philosophical importance, and that one who adequately possesses it, will thereby be enabled to see causes without the previous indications of their effects, and may even form accurate conclusions respecting things invisible, to which the same doctrine of degrees must necessarily apply.*

Such, then, is the doctrine of Degrees as taught by Swedenborg. But, though it is true, so far as it goes, I am not aware that it even claims to be perfect in such a sense as not to admit into its composition some additional considerations. I do not suppose that Swedenborg himself meant to convey the idea that each one of his Discreet Degrees was itself an absolutely *simple* unity; and it is highly probable that if he had been questioned directly on the subject, he would have admitted that each one of these was itself of a three-fold constitution, especially as he has apparently carried the doctrine of the trine down even to infinitesimals.

Let Swedenborg's first Discreet Degree, then, stand for what, in the septinary classifications given in the preceding pages, has been called the "Primary Trinity;" let his second Degree stand for our "Secondary Trinity;" and let his third, or ultimate Degree, which he says is the "complex, continent and basis of the prior degrees," stand for our *seventh* division, which we have constantly, though in other terms, represented as the complex, continent, and basis of all previous divisions —and this view without the slightest violence to any essential doctrine of Swedenborg, will bring the theory of Degrees precisely into the form in which I had conceived it. I believe that while Swedenborg himself maintained that triunity was predicable of all completeness, he also distinctly taught that the number *seven* was the common number of completeness. Consistently with this, then, it would seem that he could not avoid admitting that the septinity in some way involved the trine—of the truth of which idea a very *small* portion of the existing evidence is spread through the foregoing pages.

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* See Swedenborg's "Divine Love and Divine Wisdom," from No. 179 to 241.

The doctrine of Degrees of altitude, then, in the light of principles heretofore established, and which doubtless Swedenborg himself would have admitted, may be presented in the following modified form:

Let each component gradation in the seven-fold series be called an *Elemental* Degree.

Let each Trinity of Elemental Degrees (the Primary and Secondary Trinities, as distinguished in foregoing pages) be called a *Discreet* Degree; and

Let each seven-fold series, as a whole, be called a *Complete* Degree. We have thus Elemental Degrees, Discreet Degrees, and Complete Degrees.

For example, let the Mineral Kingdom be considered as one *Complete* Degree, the Vegetable Kingdom as another, and the Animal Kingdom as another; while each Trinity of developments in each of those Kingdoms, as before represented, is considered as a *Discreet* Degree, and each member of each of those Trinities is considered as an *Elemental* Degree; and the whole theory of Degrees of altitude will appear in a general and particular form of embodiment that will be intelligible to most minds.

Each *Complete* Degree, viewed in this light, will appear connected with the contiguous Complete Degree, in the same way as each *Discreet* Degree is connected with its contiguous Discreet Degree, and as each *Elemental* Degree is connected with its contiguous Elemental Degree; so that Nature, as a whole, will exhibit the same ascending order of *Complete* Degrees (or systems) that is exhibited by the *Elemental* Degrees composing any seven-fold series. I can not avoid the thought that this classification of Degrees, duly understood, would present a new and important aid to a proper comprehension of the *ensemble*, as well as the *particulars* of nature, with her forces, modes of operation, and mutual relations of parts.

In view of the *circular* constitution and order of procession of each system of being, as illustrated in the chapter immediately preceding this, we are prepared to further remark, that Degrees of altitude of each of these kinds, result from a *spiral uprising*, so to speak, of the circle of development, by which the first *Elemental* Degree ascends to the altitude of the second, the second to the third, and so on; or by which the first *Discreet* Degree progressively rises to the altitude of the second, and the second to the third, and by which one whole *circle* of developments, in being completed, thus forming a *Complete* Degree, passes out into another and *higher circle* or Complete Degree. For example, one octave in music, which may be considered as a series of *Elemental* Degrees of sound, forms one Complete Degree of sound, and each other octave forms another Complete Degree, superior or inferior to it, according as it is above or below it; and a similar remark is applicable to the Mineral, Vegetable, and Animal Kingdoms, before referred to as contiguous and *Complete* Degrees of creation, the higher of which arise, in some sense of the term "progression," out of the lower.

Of these latter Kingdoms it may be said, that they are all in *accord* with each other, as different octaves in music having the same key-note. In other words, each Complete Degree, Circle, or Kingdom, seems to be, member by member, an exact counterpart of the others, on a higher or lower scale; and this may be said of many other Complete Degrees. A Complete Degree, however, may take its rise any where along the circle of an antecedent Degree, in the same way as *any* note in an octave may be taken as the initial note of another and independent octave. For example, it was shown in preceding pages, that the seven-fold series of outer terrestrial developments, as mentioned by *Moses*, commenced upon the basis of the *third* development in the comprehensive geognostic series, which had been before described; and many more examples of a similar kind might be given were it necessary. But however the key-notes of different octaves (or Complete Degrees) of natural developments may differ, the octaves themselves all contain the same number of parts, which have similar relations to each other, and occur in the same order of succession; and therefore all are governed by the same serial and gradational law.

The doctrine of Degrees might receive a much more extended illustration and application than is exhibited above, but as our object should first be to establish *general principles*, the foregoing must suffice for the present. Owing to its novelty and somewhat abstruse nature, this doctrine may, to the ordinary reader, be at first somewhat difficult of full comprehension; but I can confidently assure him, that if, by the little perseverance of mental effort that will be required, he succeeds in mastering it, he will find that it will greatly simplify and facilitate investigation in every other department of thought, whether in physics, psychology, theology, or as relating to any of their numerous cognate subjects.

CHAPTER XXI.

THE DOCTRINE OF CORRESPONDENCES.

As a natural sequence of the doctrines of Serial Circles, and of Degrees, as presented in the foregoing pages, arises that doctrine of Correspondences which has been the guide to so many important conclusions set forth in this work. All perfect Series, Circles, or complete Degrees involved in the system of creation, must, of course, proceed from the same final Cause; and as they must thus correspond to the common final Cause, they must hence, in some way, correspond to each other. Moreover, every complete Degree in the character of a Circle, necessarily involves the same principles of constitution with all other Circles, and therefore must, in the *general* sense, correspond to all others, whether they be on a higher or lower scale. And as each circle consists of the same number of parts, which occur in the same order of sequence and relations, so each *part* of any circle corresponds, in the general sense, to the similarly disposed *parts* of all other circles. Thus it is, that if we acquaint ourselves thoroughly with the characteristics and interior principles of any complete circle or Degree in nature, we may, in a general way, make it the exponent of all other circles or complete Degrees. But in order to pursue this correspondential method of investigation to the best advantage, and with the most accurate results in the way of eliciting truth, we must, of course, have a due regard to the relative positions in the whole grand scale or

Circle of creation, occupied by the two circles which are the special terms of comparison, and to the peculiarities of quality and development incident to their respective positions.

The comparison exhibited in foregoing pages, between Primary and Secondary Trinities, or Discreet Degrees, as they were subsequently called, shows that there exists also a general and particular correspondence between them; but this correspondence is not so perfect as that which exists, generally and particularly, between the *Complete* Degrees or *Octaves* of natural unfolding.

It may, moreover, be said that any two creations, forms, or developments, which involve the *same principles* of constitution and operation, correspond to each other, however various may be the specific departments of existence in which they may be found. An identity of *principles*, indeed, is the essential basis of correspondence between higher and lower, or between ulterior and prior developments; and in the light of this fact, all forms and developments in the material and exterior world may be seen to correspond even to things of a *spiritual* nature; and things of a spiritual nature may, on the other hand, be seen to correspond to them. Indeed, if the science of Correspondences were duly developed, nature would appear as if invested with ten thousand tongues, which would continually be vocal with instruction. Every kingdom and form; every shrub and tree; every leaf and flower; every insect, beast, and bird; nay, every point of compass and angle of direction from any given point, and every curve, circle, spiral, or other mathematical figure, would speak a distinct language, and discourse of a separate truth; and the whole grand system of Nature as One, would continually discourse of its Infinite Divine Author, of whose creative Wisdom and Love it is but an outer expression and correspondent!

The doctrines of Series, Circles, Degrees, and correspondences, therefore, if properly developed and understood, would be the most efficient of all possible aids to the discovery of that grand system of general truth whose millions of parts are all harmonious, mutually explanatory, and corroborative, of each other. Let the leading minds of the age, then, bestow due attention upon the development of these principles of investigation; and in proportion as they are comprehended and applied in the world, the conflicts of the various parties in philosophy, theology, and even politics, will be swallowed up in one grand and harmonious system of thought, the credentials of whose truthfulness will be borne upon its very face, to be seen and read of all men. With the aid of such a system, properly unfolded, even the child might set out on its course of progression, with the *unadulterated* truth, and even the *whole* truth—which, though at first in a diminished form of representation, and involved in comprehensive generals, would, as the mind expanded, gradually magnify, and regularly and harmoniously unfold into particulars, for ever and ever. The harmony of thoughts thus brought about in the world, would, in proportion to its degree, be necessarily accompanied with a more intimate and spiritual conjunction with the Divine Source of all harmony, from the perpetual inflowings of whose Love and Wisdom, all the movements of human society, in common with the movements of those planetary and celestial spheres which now, without reservation, own the Divine sway, would proceed without a jar, or a single note of discord. This would be the long-looked for, and long-prayed for, reign of God upon earth!

CHAPTER XXII.

THE DOCTRINE OF PROGRESSIVE DEVELOPMENT.

One important object of this treatise, as doubtless has been observed, is to exhibit the connection of nature with her interior, producing Cause, and pervading Life-force. The reader who has attentively followed us in the previous discussions having a bearing upon this subject, has observed that our philosophy has uniformly tended to the idea of an intelligent, voluntative Divine Agency, as concerned in the origin and government of the outer system of things. But as our object should be to discover truth for the sake of truth, irrespective of its character or consequences, it would be manifestly inconsistent to ignore any facts or manifest principles of nature which have been thought by any party in philosophy to militate against conclusions such as those exhibited in our previous reasonings. As the next natural step beyond the foregoing investigations, therefore, we proceed to briefly notice the merits of a pending controversy, embracing, substantially, the questions, *whether the system of nature is the result of the operation of an inherent force or law of progressive development? or whether it is the result of a series of special and independent exertions of Divine Power, with little or no regard to law?* Though these questions suggest two opposite views, neither of which we are able to adopt without some important qualifications, it is proper that they should here be exhibited, together with the main features of the discussions they have engendered, in the form in which they have extensively occupied the minds of philosophers and theologians of late years; and it may be, that in the light developed by their conflicting affirmative and negative arguments, a *true modified* theory will be brought into view.

A few years ago there was published an anonymous work, entitled, "VESTIGES OF THE NATURAL HISTORY OF CREATION," in which the idea that creation is the natural result of the operation of certain fixed laws, is ingeniously maintained. Though the author of that work does not reject the idea of a *remote*, he rejects that of an *immediate*, Divine Agency, as concerned in the generation and government of the outer forms of nature; and as his positions, *viewed in one light*, present, unintentionally, perhaps, on his part, a condensed synopsis of the whole groundwork of the pantheistic and materialistic philosophy, it is proper that they should here be summarily exhibited.

Assuming the correctness of the nebular theory of cosmical creations (after epitomizing, in a cogent and felicitous manner, the prominent points of evidence on which this theory is based), the author urges this theory as exhibiting a succession of *law-governed changes*, by which primordial matter was resolved into stellar systems, solar systems, and planets, with all their present general and particular movements in space. The facts in Chemistry and Geology are then considered, as showing that the present structure and physical arrangements of our globe (together with all similar globes in space) originated, probably, from laws governing solid, fluid, and vaporiform substances.

The progressive and law-determined development, also, of *organic* beings, both in the vegetable and animal kingdoms, with man at their head, is then maintained by arguments, of the more important of which, the following is a brief synopsis.

1. "We have seen powerful evidence," says the author, "that the construction of this globe and its associates, and inferentially that of all the other globes of space, was the result, not of any immediate or personal exertion on the part of the Deity, but of natural laws, which are the expressions of his will. What is to hinder our supposing that the organic creation is also the result of natural laws, which are in like manner an expression of his will? More than this, the fact of cosmical arrangements being the effect of natural law, is a powerful argument for the organic arrangements being so likewise; for how can we suppose that the august Being who brought all these countless worlds into form by the simple establishment of a natural principle, flowing from his mind, was to interfere personally and specially on every occasion when a new shell-fish or reptile was to be introduced into existence on *one* of these worlds?" The writer further argues that, "to a reasonable mind, the Divine attributes must appear, not diminished or reduced in any way, but infinitely exalted, by supposing a creation by law."

2. The writer submits that the progressive succession of organic beings, as revealed in fossilology, by which the lower and more simple forms, as a general rule, precede the higher and more complex, is in perfect harmony with the hypothesis of development by *law;* whereas, on the supposition of special Divine exertions, it might be supposed that there would have been many specialities of Divine creation, as essentially modifying the existing order of things.

3. Particular facts and analogies, as connected with the organic kingdoms, seem to hint that forces are lodged in nature

from which the simpler species in the vegetable and animal world may, under certain circumstances, derive their origin. Reference is made to the vegetable-like forms of frost on the window, and to the shrub-like form of crystallization known to chemistry as the *Arbor Dianæ*—also to the vegetable-like forms of some of the ordinary appearances of the electric fluid; and from these phenomena the writer argues the probability that electricity is largely concerned in the origination and growth, not only of crystals, but of plants, which assume forms according to specific generative and other conditions. Moreover, the growth of certain plants for which no seeds were sown, and in situations where it is next to impossible that such seeds could have existed, is thought to add probability to the theory of a possible spontaneous germination of vegetable forms without the ordinary seminal mode of origination—provided such changes are suddenly made in the ingredients and conditions of a soil as are favorable to the development of organic from inorganic forms. The author also mentions the singular facts that oats cropped down so as to prolong the period of their growth, have been known to progress, by regular transmutation, into the form of rye; and that the cabbage is known to be, in its native state, a trailing sea-side plant, totally different from the plant in its cultivated form. These latter facts, with others, are thought to strongly support the theory of a *transmutation* of species from lower to higher forms.

4. The formation of entozoa, or animals within animals, where their eggs could not possibly have been deposited, is thought to argue powerfully for the independent generation of the lower animal forms, when certain conditions obtain that are favorable. This argument is thought to be strengthened by the fact that insects of a low species (the acarus) were repeat-

edly produced in abundance, apparently solely by galvanic processes instituted by Messrs. Crosse and Weekes; and in one instance, a growth of fungi of a beautiful and previously unknown species, was produced by the last named gentleman, by the same process.*

5. Particular features of animal organization, which are apparently useless and incidental, are also adduced in support of the same theory of law-development. Thus female animals of many species have certain organs which are *necessary* to their sex; while the same organs exist *rudimentally* in the males, to whom they are *not necessary.* "For example," says the writer, "the mammæ of the human female, by whom these organs are obviously required, also exist in the male, who has no occasion for them. It might be supposed that in this case there was a regard to uniformity for mere appearance sake; but that no such principle is concerned, appears from a much more remarkable instance connected with the marsupial animals. The female of that tribe has a process of bone advancing from the pubes, for the support of her pouch; and this also appears in the male marsupial, who has no pouch, and requires none." Other animals, and especially among those which form links between lower and higher orders in the scale of development, have the rudiments of organs, to them unnecessary, but which were necessary to animals beneath them in the scale; but of facts of this kind I need not give further details. These abortive and rudimentary organs, ex-

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* These alleged results of the experiments of Messrs. Crosse and Weekes, were at first almost universally scouted as absurd and impossible; but subsequent repeated experiments, performed during several years, seem to leave no doubt of their reality. I perceive by a late communication, published in the newspapers, from Mr. F. F. Ogden, United States Consul at Liverpool, that that gentleman has recently visited the laboratory of Mr. Crosse, and became entirely convinced of the truth of the wonderful representations concerning this newly produced insect.

isting where they are not necessary, must, it is thought, be regarded as blemishes and blunders, on the supposition that the beings who possess them were created independently and by special exertion; but they are considered as precisely what might have been expected on the supposition that creation has proceeded through her various ramifications and transitional stages, according to the energizing and directing influence of a uniform law of development.

In further illustration and support of the theory of progressive development, the writer quotes the following startling passage from *Fletcher's Rudiments of Physiology*, in which it is shown that the general forms, and the order of succession, of the developments in the animal kingdom, are represented by the general forms, and the order of succession, of the developments of the human fœtus. "It is a fact" (says Dr. Fletcher), "of the highest interest and moment that, as the brain of every tribe of animals appears to pass, during its development, in succession through the types of all those below it, so the brain of man passes through the types of those of every tribe in the creation. It represents, accordingly, before the second month of uterogestation, that of an avertebrated animal; at the second month, that of an osseous fish; at the third, that of a turtle; at the fourth, that of a bird; at the fifth, that of one of the rodentia; at the sixth, that of one of the ruminantia; at the seventh, that of one of the digitagrada; at the eighth, that of one of the quadrumana; till, at length, at the ninth, it compasses the brain of man. It is hardly necessary to say," continues the writer, "that all this is only an approximation to the truth; since neither is the brain of all osseous fishes, of all turtles, of all birds, nor of all the species of any of the above order of mammals, by any means precisely the same; nor does the brain of the human fœtus at any time precisely resemble, perhaps, that of any individual whatever among the lower animals. Nevertheless, it may be said to represent, at each of the above-mentioned periods, the *aggregate*, as it were, of the brains of each of the tribes stated."

Although these facts were stated by Dr. Fletcher without any view to the support of the development-hypothesis now under consideration, it is remarkable that the series of animal forms which he here traces as representing the series of successive human fœtal developments, is the very series which, in the same order of succession, made their appearance on the globe during the depositions of the fossiliferous rocks from the earliest to the latest.

The foregoing are the principal arguments, fortified by many minor facts and considerations, from which the author of the "Vestiges" concludes that the whole system of creation, with all its diversified forms, inanimate and animate, from its first to its last stage of unfolding, was brought forth under the operation of one grand law of progressive development, by which "*the simplest* and most primitive type gave birth to the type next above it," by which "this, again, produced the next higher, and so on to the very highest, the stages of advance being in all cases very small—namely, from one species only to another, so that the phenomenon has always been of simple and modest character." He considers that after the production of the first and lowest animal form, the higher type was, in all cases, produced from the lower, according to the ordinary process of generation, and that its superiority to its parent was, in each instance, owing to a prolongation of the process of utero-gestation, aided by new and favorable circumstances, by which the form next superior to the parent, in the pre-ordained animal scale, was attained. A similar principle of transmutation was applied also to the Vegetable

Kingdom, by which it was thought that higher forms ascended from lower, until the highest were attained.

A theory so novel and startling as the foregoing, did not, of course, escape the most vigorous opposition from adherents of prevailing theories in philosophy and theology. This opposition was specially inspirited by the alarm which was taken by the dominant theology, which considered the theory in question as a bold invasion of her assumed prerogative as a generally unquestionable guide in matters of religious faith. The main features of this opposition (which, we think, was partly just and partly unjust) require here to be briefly represented, together with the essential points of argument in the rejoinder which the opposition called forth from the author of the "Vestiges."

The book in question was charged with a "direct tendency to expel the Almighty from the universe which He has made —to degrade the god-like race to whom He has intrusted the development and appreciation of His power, and to render the revelation of His will an incredible superstition;" and, probably with quite as strong a desire to neutralize this alleged tendency considered in the abstract, as to develop truth regardless of its consequences, its essential idea was pronounced "an opinion which has not a single fact in its favor—which stands in direct opposition to all the analogies of nature —which is repugnant to the best feelings of mankind, and subversive of all our most cherished convictions—a fraud committed upon the reason, and an insult cast upon the dignity of our species."*

The zeal of the prominent opposers of this work, and their devotion to the one grand object of putting it down, as indicated in these and similar denunciatory expressions, may, in some instances, have caused them to unconsciously magnify the seeming evidences against the theory it propounded, and as unconsciously to underrate any real evidence which may exist in its favor. Candor requires, therefore, that we should look at the merits of this, as well as of all controversies of a similar nature, aside from all mere denunciation such as novel theories, true or false, are ever apt to provoke—and in the light of the plain facts and arguments which bear upon the case, by whichsoever party these may be urged.

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* North British Review for July, 1845.

The nebular hypothesis of cosmical creations urged by the author of the "Vestiges," as the initial portion of the universal system of creation supposed by him to be unfolded by law, was objected to mainly on the ground that the Earl of Rosse's telescope had succeeded in resolving into stars certain nebula which were before considered irresolvable, and in considerably changing the apparent form and outlines of others, which had previously appeared such as to countenance the idea of agglomerating and rotating masses. In view of such "unequivocal facts," one principal reviewer regards it as a "most unwarrantable assumption to suppose that there are in the heavenly spaces any masses of matter different from solid bodies composing planetary systems." To this our author replies that the resolution of a great quantity of previously unresolved nebulæ, by Lord Rosse's telescope, "was, of course, to be expected, and it is a fact, though in itself interesting, of no consequence to the nebular hypothesis." There are still many nebula which even the stupendous powers of Lord Rosse's instrument do not sensibly affect, and which probably no increase of optical power ever to be attained by human science or art, would be adequate to resolve. But the present position of the nebular theory in respect to its philosophical credibility, is more fully represented in a previous portion of this work.

The theory of progressive succession in the organic kingdoms, as advocated by the "Vestiges," is disputed mainly on the following grounds: First, that fishes of a high organization occur (as it is said) in the oldest of the fossiliferous rocks; secondly, that in several instances the passage from a lower to a higher system of rocks, is accompanied by an abrupt and entire transition in the organic kingdoms, exhibiting none of the links of progressive gradation which the theory of the "Vestiges" supposes to exist; and thirdly, that in some instances several widely different and previously unknown species seem to have been introduced at about the same epoch, with apparently no links of connection between them.

To the allegation that fishes of a high organization occur in the *oldest* of the fossiliferous rocks, the author of the "Vestiges," in his sequel to that work, replies by quotations from geologists, showing a discrepancy in their statements upon this point, which, however, he shows may be explained by the fact, that since the statements of *some* of them were put forth, "the lower fossiliferous rocks have been divided into several distinct formations, in the lowest of which it is fully admitted there are no vertebrata. He, moreover, argues that the cephalopoda and gasteropoda, mollusks of a high organization, whose remains are found in the oldest series of fossiliferous rocks, might, as transmuted species, have come in soon after the commencement of the formation of those rocks, as owing to a "rapidity of generation" and "rush of life," which is sometimes characteristic of certain of the lower orders of animals.

In answer to the argument which negatives the idea of connecting links between lower and higher species, and between widely dissimilar species existing in the same system of deposits, he *generalizes the field* of geological observation, and finds particular systems, both of rocks and their contained fossils, more fully and particularly represented in some localities than others. By the facts which he develops in this branch of the discussion, he succeeds in materially weakening, though perhaps not entirely disproving, the assumptions of his opponents, that the character of organic life has been subject to frequent abrupt and entire changes. He considers it probable, moreover, that "development has not proceeded, as usually assumed, upon a single line, which would require all the animals to be placed one after another, but in a *plurality of lines, in which* the orders, and even minuter subdivisions of each class are ranged side by side;" and he argues that "the development of these various lines has proceeded independently in various regions of the earth, so as to lead to forms not everywhere so like as to fall within our ideas of specific character, but generally, or in some more vague degree, alike."

Upon the whole, the author reasserts his main position with so much force and ingenuity, and brings to it such an accession of evidence from the testimonies of geologists and naturalists, as apparently to render the general onslaught of his opponents, for the most part, a failure; and perhaps it would not be unfair to consider their subsequent silence as, in some degree, a tacit admission of this fact.

Though the author of the "Vestiges" acknowledges that God is, in some sense, ever present with his creation, and supports and rules it by his Providence, he admits this merely as the intimation of an internal sense or feeling, for which he does not pretend to have any philosophy. But in the absence of such a philosophy, those who *have not* this internal feeling of the presence and overruling Providence of God (as many have not), very naturally employ the whole force of facts and arguments, such as have a very thorough development in the book referred to, in support of the idea that nature develops all her forms and phenomena, by an inherent force of her own, independent of any superior influence, as received from a Source *without* herself. Such theories can, of course, be successfully met only by the weapons of a cogent and well grounded philosophy, as relating to the matters in dispute; but as such a philosophy does not yet prevail, to any extent, in the world, it hence follows, as a fact much to be lamented, that faith in God and his overruling and universal Providences, is, to a large extent, at the mercy of pantheistic and materialistic philosophies. Such philosophies are hence continually growing more rife and rampant; and when those who know *for themselves*, from *intuition*, that there is a God ever present with, and ever ruling, the affairs of creation, find themselves incompetent to meet the arguments for the opposing views, they are apt to grow impatient, and to descend to mere ridicule and denunciation, and sometimes even to misrepresentation—a mode of treatment which seldom fails to excite the contempt of those toward whom it is aimed, and even to confirm them in their anti-religious theories.

Common sense should teach every one that it is worse than useless—nay, perverse and wicked—to close his eyes to plain facts in nature, *whatever* may be their apparent theological or philosophical bearings; and whoever would do such an act, is plainly not so much devoted to the furtherance of *truth* as he is to the maintenance of his own opinions. Looking fully in the face, therefore, as in duty bound to do, all the clearly established facts exhibited by the "Vestiges of Creation," as well as every other species of fact, let us see whether the general philosophy of this work will afford any light by which outer appearances, reflecting a natural law or force of development, and the interior sense of the human soul, respecting the constant presence of God, and the exertion of his upholding and directing power, may be rationally harmonized. By way of attempting the solution of all apparent discrepancies, as involved in these subjects, we will, in the following pages, endeavor to unfold the true theory of law agency and Divine agency, as it appears to us.

CHAPTER XXIII.

FURTHER VIEW OF THE SYSTEM OF LIVING FORMS, AS SUGGESTING ITS MODE OF DEVELOPMENT

HAD the author of the "Vestiges of Creation" and his opponents both understood the doctrine of Series, Degrees, and Correspondences, as unfolded in the preceding pages of this work, and had they duly observed the indications of these doctrines in regard to the origin, constitution, and laws of nature, the relations of visible effects to invisible and spiritual causes, and the relations of the universe and all its sub-serial and corresponding parts, to the Infinite Divine Spirit, as the Projector, Originator, and Vitalizer of all, they might, by a *mutual*, and in that case *obviously required*, modification of their views, have come to a perfect agreement on all essential points, without compromising any true principle of theological faith, or disregarding any real fact in science or true principle in philosophy. The view which, as it appears to me, reconciles all real scientific facts, and all true philosophical and theological principles, I will now proceed to briefly unfold.

I will premise by saying that the idea of *progression*, as a general fact connected with the origin and movements of creation, as a whole, and with the origin and movements of each of its sub-serial and correspondent parts, seems to be necessarily involved in the idea of successive movements or unfoldings, from beginnings toward predetermined ends. Every successive movement or effort is a closer approximation to the proposed end of the whole series of movements, and is therefore a decided progress from a previous and more rudimental state or position. Accordingly all philosophy and all revelation concur in the acknowledgment that creation, from its incipient to its present stage of development, has passed through a regular series of progressive unfoldings; and this fact is recognized as applying equally to the cosmical universe, to the geological formations, and to the various systems of organic forms, beginning with the lowest and ending with the highest, whose remains have been successively entombed in the rocks.

It is true there are occasional and apparent exceptions to this rule—occasional instances of particular retrogression on the one hand, and irregular and abnormal advances on the other; but these are owing to local circumstances and isolated influences, and when properly understood, they *prove*, rather than *disprove*, the general rule. The idea may be illustrated by the following simile: Let a number of vessels, of different classes, be supposed to sail from the same port, at the same time, and bound to the same place of destination. Wafted by the same breezes, and floated by the same tides, they, for a time, make nearly equal progress, sail in nearly parallel paths, and generally keep each others company. But owing to slight diversities in their sailing qualities, and incidental differences in their modes of manœuvring, their courses gradually diverge from each other, and they get into different currents of ocean and of atmosphere, some of which are propitious and some the reverse. They are then farther dispersed by hurricanes; some of them, by violent gales occurring only in their own localities, may be driven hundreds of miles out of their course, or in a retrograde direction; a few of them may be driven upon rocks or quicksands, and lost out right; while others may be driven forward with equal violence, and reach their destined haven in an apparently irregularly short period of time. Of course no one would consider the diversities in the fates and successes of these different vessels, or the fact that some were for a time driven backward, that some were lost outright, and that others were driven forward with a velocity which seemed to set all idea of a regularly graduated motion at defiance, as any proof against a general law of progression, as applied to the sailing of ships from port to port, but the proof would, upon the whole, be the reverse.

Allow these ships, then, to represent an equal number of Divine archetypes, or pre-existing ideal forms of creation, so to speak, which set out, at one and the same time, upon the voyage of progressive development, all being bound to one haven, viz., the realization of the clothing of an exterior form; the diversities in their movements, presented in the retardations and temporary retrogressions of some, and the fitful and apparently preternatural accelerations of others, as owing to the various currents and counter-currents of outer influences, no more disprove the law of *general* progression, with reference to them, than similar diversities of movement prove the same thing with reference to the ships. When we, therefore, find a few local examples of vertebral fishes among some of the strata of the first series of fossiliferous rocks, or when we find, in one or two instances, the remains of a diminutive air-breathing reptile, in an upper member of the Old Red Sandstone series, where, as it is stated, such have recently been found;* or when, in human history, we find examples of whole nations and races remaining apparently stationary for thousands of years, while others have, at early periods, come to a high state of advancement in art, government, and social refinement, which were again succeeded by universal ignorance and barbarism—we are not to consider these examples as contradicting the doctrine of progression, as a *general* principle, but as only the *particular* and *local exceptions* to the *direct* development of that principle in outer forms.

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* See Edinburgh Philosophical Journal for April, 1852, pp 353–4.

Keeping in view, then, the doctrine of general Progression as an undeniable principle applicable to the universal series of creation as a whole, and to all its included and corresponding sub-series, we are prepared for further inquiries respecting the *order* and method of progression, and the mutual relations of the different parts or degrees of each series of creation to which this principle applies. In making these inquiries, our attention will be confined for the present to the Animal Kingdom, which will serve as a representative of all other serial creations.

The fact alluded to by the author of the "Vestiges of Creation," that in the reproduction of the higher animals and of man, the embryo passes through successive stages of development, in which the types of all the lower animals, beginning with the fish (or, as some say, with the annalid or worm), are represented in succession, until its own proper type is attained, is certainly of great significance, as it bears upon the subject under consideration. But Professor Agassiz has made some further discoveries in the department of embryology, which would perhaps go to emphasize the conclusions to which this fact would seem naturally to point. I would refer now particularly to the discovery that the embryos of animals of certain *existing* families bear, at a certain stage of their fœtal progress, a distinct resemblance to the perfected individuals of now *extinct* species of the same families, which existed in early geological periods. From his remarks on this subject, I submit the following quotations:

"Embryology," says he, "by the metamorphoses which take place in animals, assigns now a value to external forms, and not only assigns them a value, but a chronological value, by which it is possible to consider as lower those animals which agree with the earlier forms of the germs." . . . . . .

"The class of fishes which I have studied more particularly, has shown me that the first types appeared under forms, and with an organization, peculiar to *embryos* of that very class in the present epoch, proving thereby, with perfect evidence, the inferiority of the first created types, as well in their peculiar class as in their department. But though of a lower order, these types of ancient ages bore in themselves, from the beginning, the impression of the plan that was to be successively developed in the different epochs which have preceded the order of things existing at present, and by whose realization have been brought about those numerous families of Fishes, Reptiles, Birds, and Mammalia, which now live upon the surface of the earth." Again: "All the information about the fossils—all the information of former ages, will have to be compared with those embryonic forms, in order to understand more fully the analogy which exists between these earlier types, and the successive changes which those of our day undergo to assume their final form. If I am not mistaken, we shall obtain from sketches of those embryonic forms, more correct figures of fossil animals than have been acquired by actual restoration."*

These extracts from one who is an advocate of the idea of creations *de novo* at different geological epochs, certainly argue much for a connection of *some* kind between the lower and higher, or extinct and living, species of animals of the same families, and pretty clearly show that the higher and existing species are, in many instances, the result of an *extension of the identical gestative process* which, in its lower stages, was exemplified in the ancient species. Such being the existing evidence of a connection between ancient and modern species of the same families and genera, and that the modern species exist, at least as a progressed sequence of the *principles* involved in the ancient, we will now quote from the same author some further illustrations of the analogies and connections existing between the different and successively created divisions of the Animal Kingdom as a whole, with man at its head:

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* Agassiz's "Lectures on Comparative Embryology," delivered before the Lowell Institute. Boston. Lec. xii

'The unity of structure in vertebrated animals," says he, "has been understood, and well understood, long before Embryology had added any thing to show how deep this unity of plan was impressed on that type. By the investigations of Comparative Anatomy, it had been ascertained that the external differences which characterize the class of Fishes, that of Reptiles, that of Birds, and that of Mammalia, were only modifications of one and the same structure—that the head of Fishes, for example, though apparently so different from that of Man, was made up of the same bones, arranged in the same manner, only sub-divided into more distinct points of ossification, with modified proportions, most of them remaining movable for life, but, after all, arranged upon the same uniform plan."

In a previous paragraph, the same author says: "It was in Physiology, a great discovery, when it was ascertained that all Vertebrata, that Fishes, as well as Reptiles, as well as Birds, as well as Mammalia, arose from eggs, which have one and the same uniform structure in the beginning, and proceed to produce animals as widely different as they are in the full grown state, simply by successive, gradual metamorphoses; and these metamorphoses upon one and the same plan, according to one and the same general progress." Again: "It may therefore be said, with perfect propriety, that the higher Vertebrates undergo changes, through which, in different periods of their life, they resemble the lower ones; that there is a period when the young bird has not only the form, but the structure, and even the fins, which characterize the Fish. And of the young Mammals the same may be said. There is a period in the structure of the young Rabbit (in which the investigations have been traced more extensively than in other species), when the young Rabbit resembles so closely the Fish, that it even has gills, living in a sac full of water, breathing as Fishes do. So that the resemblance is as complete as it can be, though each of these types grows to a complication of structure, by which the young Mammal, for instance, leaving behind this low organization of the lower types, rises to a complication of structure, to higher and higher degrees, and to that eminence even which characterizes mankind."*

These facts certainly show a unity of plan and a progressive succession of, in *some* sense, mutually dependent forms, in the system of animated nature, which countenances the idea that the whole creation of lower animals is, as it were, the *fœtus* of the whole human creation, and that the latter was thus developed by a process somewhat resembling that which the author of the "Vestiges of Creation" supposed to have taken place, and which he calls "the universal gestation of Nature;" yet we shall soon see that, so far from this theory dispensing with the agency of a God, this universal gestative process could not have proceeded even through its first stages, without the constant influx of a vitalizing and energizing Influence from above all nature, and hence from a source absolutely Divine.

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* Lectures on Comparative Embryology, Lec. xii.

It may here be remarked that these facts, developed by the researches of palæontologists, embryologists, and physiologists, concerning the relations and order of succession of the different divisions of the animated tribes, *are in perfect agreement with the general mode of philosophizing presented in this work*, by which all general facts in each system of creation, and all systems of creation as *grand* facts, are arranged in a harmonious serial order of progression, in such a way as to show a thread of unity and correspondence running through all systems, and through the grand system of systems, from the very origin to the very ultimates of all things.

This scheme of creation brings the Animal Kingdom, as well as the Vegetable, and all other complete systems of creation, together with the grand System of all systems, under the analogy of a TREE, with its seven serial and progressive parts, consisting of Roots, Trunk, Branches; Leaves, Flower-buds, Blossoms, and FRUIT. It is thus strongly hinted that the whole universal System of creation, with all its corresponding sub-systems, including the Vegetable and Animal Kingdoms, while *under the constant vitalizing and voluntative influx of Divine Love and Wisdom, which are spiritual Heat and Light*, *grew up*, as it were, *from Germ to ultimates*, in the same progressive and sequential order in which the tree grows from root to fruit, under the constant influx of *solar* heat and light, which are the *natural correspondents* of Divine Love and Wisdom.

But if this view is admitted, it will not of itself necessarily decide the question as to whether each higher creation was in all cases developed from the parentage of the one immediately below it in the series to which it belongs. There is, apparently, one exception to this order of parental extraction in the developed parts of the superiorly organized tree: The flower-buds, though they are the next superior development to the leaves, are not an outgrowth from the leaves, but, in common with these, they are the next superior outgrowth from the branches; and the leaves, after performing their specific functions, die and drop off, without giving rise to any succeeding and superior form of developments. The flower-buds are undoubtedly an ascension of the same essences and principles which, stopping one step short of them, produce the leaves, and which, in each case, ascend from all the preceding developments of the tree as represented in roots, trunk, and branches.

It should be remarked, however, that in a less perfect class of vegetable forms—the cryptogamia—the organs of fructification, involving, of course, the principles of the bud, are developed *upon the leaves*, which, in this instance, shows the relations of parent and offspring between the two developments, and preserves the succession between them unbroken.

Concerning the genesis of the Animal Kingdom, then, as well as that of all other Series and Degrees of creation, it may, so far as the known analogies of nature are concerned, and without in either case affecting our views of the Divine agency, be consistently believed, either that the higher tribes in the Animal Kingdom (as well as in the Vegetable and other Degrees of Creation), at certain periods, and under certain revolutionary conditions or Divine impulsions hereafter to be explained—*proceeded by orderly descent, from the tribes next below them, as their natural parents*—or that they proceeded, at the same periods and under the same conditions *from the aggregate of all preceding developments of nature, as constituting their general material germ,* while they had no *special* lineal connection with the forms next below them in the series. Either of these suppositions would sufficiently comport with the unity of the general plan which we have before observed to pervade the works of creation. The probability is, however, that *both* of these modes of production were, to some extent, observed in the origination of the *ensemble* of the Animal and other Kingdoms; but in neither case is it probable that any form or creation was unfolded, except upon the basis of a suitable preceding development, which, in some sense, served as its material germ, or predisposing condition of development.

Unless we adopt some such theory as here propounded, many natural facts—facts which the cause of *true* theology and religion can never be subserved by denying—will remain entirely inexplicable.

CHAPTER XXIV.

LAW AGENCY AND DIVINE AGENCY.

In the light of the foregoing remarks respecting the order, successive developments, and relations of the organic tribes, let us now press to a final and more specific decision, the question, whether the system of Creation, as it now stands, came to exist, in any sense, through the operations of Law?—and if so, in what sense, and with what accompanying conclusions relative to the doctrine of Providences, or of Divine interpositions?

But that we may pursue this inquiry intelligibly, we must obviously first define precisely what we mean by the term "Law." Law, as it is understood by the best authorities, means simply a rule of action, or a definite mode or method in which force and motion proceed toward the accomplishment of an end. It is not, therefore, of itself, either force or motion, but only the *rule* of action which these, in their operations, are made to observe.

Now it may be safely asserted that there is no force or motion, either in the universe of matter or the universe of mind, which, in its operations, does not observe *some* rule, *some* method, and hence *some* law. If, indeed, there could be any action or motion *without* method or law, that action or motion would necessarily be chaotic, and would tend directly to the total subversion of all law and order, and thus to reduce all things to chaos. It is impossible for a man to conceive a thought, except in accordance with some law of thought. Nay, it is self-evidently impossible even for the Infinite Mind to conceive a thought, or put forth an action, except in connection with some definite mode or form, and hence law, of procedure which that thought or action spontaneously assumes. In the Infinite Mind, therefore, Law, in its spiritual sense, is self-existent and eternal. Thence it proceeds, by volition, in outer creations, and assumes the forms of what are termed the "laws of nature." These, as modes, or rules of material motion, commence at the lowest and most chaotic germs of the physical universe, and (being constantly supplied by voluntative and *higher* inflowings from their Infinite Spiritual Source) proceed in regular order of ascending development, through all subsequent motions and creations, until, in the heights of the celestial universe, creation again merges itself in that Infinite Divine Essence from which it originally sprang. And as all motions are in accordance with some definite rule, method, or law, hence all forms, creations, and conditions, from lowest material to the highest spiritual and celestial, which, in regular serial orders, are developed *by means of* those motions, are necessarily law-developed and law-governed. If this were not so, then creation, indeed, would not exhibit *any* system or method in its arrangements, such as is now apparent throughout its whole domains, but the various forms of which it is composed, would necessarily be totally disconnected and confused.

It is worthy of remark, that the idea of law as governing the processes of creation obtains predominance in proportion to the development of the human mind. Thus the child conceives that the grass is made to grow by an abstract interposition of the power of God, with which he is unable to connect any idea of law. But as his mind unfolds, and the field of his observation extends, he discovers that grass grows, in all cases, under certain given conditions, and hence grows according to a fixed rule. He still, perhaps, believes that God, by a direct and *isolated* fiat of His will, causes the rain to fall, the thunder to peal, and the lightning to flash; but a further development of his mind corrects this impression, and shows him that the rains, the thunders, and the lightnings, are dependent upon a more *general* administration of the Divine Power through atmospheric and electric media and conditions. He still, perhaps, imagines that the sun, moon, and planets are made to pursue their courses in the heavens by the direct volitionary effort of God concentrated specifically and abstractly upon them; but when his mind is introduced to the series of demonstrations presented in the science of Astronomy, he perceives that all these phenomena are in accordance with a general method in which all aggregations of matter in free space act. He still probably believes (according to a common, and, as we have before shown, an erroneous interpretation of Sacred Scripture) that the earth on which he dwells was directly spoken into existence by God, in the space of six literal days, about six thousand years ago; but when he attains a more enlarged understanding of the mechanical and chemical forces which God has incorporated in the system of nature, and reads the physical history of our planet as written upon the rocks, he perceives that our globe has been brought from a primeval chaotic, to its present perfected state, by means of fixed methods of operation of matter, expressed by the terms, "condensation," "abrasion," "deposition," "segregation," etc. And if the hypothesis (seemingly supported by all analogy) that vegetable, animal, and even *human* organisms, came to exist through the instrumentality of equally fixed and unvarying laws, is now met by storms of opposi tion and ridicule, it should be remembered that precisely similar opposition, based upon precisely the same grounds, attended a similar announcement when first made, with reference to the origin and *modus operandi* of many forms and departments of nature concerning which the announcement is now fully admitted to have been true; and the final triumphs of Astronomy and Geology over the dragon of *unscriptural*, as well as *unphilosophical*, opposition, which stood before their parents to devour them as soon as they were born, should stand as a warning against a too hasty decision unfavorable to law-developments, as applied to all other departments, organic and even spiritual, as well as inorganic and material.

Yet, when it is asserted that all things, as to their creation and functional operations, are within the governing influences of law, the sense in which we have defined the term "law," should be distinctly borne in mind; and for the sake of more explicitness on this point, as well as to show that our position involves no objectionable theological corrolaries, we will here submit a few more considerations respecting it.

I have said that Law is not of itself *force* or *motion*—hence, that it can create nothing or do nothing of itself; but that it is simply the *mode* or *rule* by which force and motion act. Hence, when we speak of the "law of Expansion," for instance, we refer only to a mode of operation among particles or substances, which is expressed by the term "Expansion;" when we speak of the "law of Gravitation," we only refer to that particular mode of action among materials which the term "gravitation" defines. And we have a similar meaning when we speak of any other law. But the *Force* by which the action, proceeding according to these various laws, is generated, remains yet to be accounted for; and this we will now attempt to do, at the same time that we attempt to illustrate how *modes* or laws of action came to be such as we see them. The remarks now to be offered will, at the same time, illustrate the *direct* agency which God has in the process of creation, and furnish the foundation of a true understanding of the doctrine of Providence.

One feature of the present subject has already been presented, under an illustration which may again be called up, and carried out into further particulars. A builder, before proceeding to the outer construction of an edifice, first conceives the general plan, and ideally perceives the general appearance of that edifice in his own mind. This conception is the archetype or pattern according to which the edifice, as an outer object, is to be erected; and its erection is a mere clothing of the archetype or pattern, with outer material investiture. But this clothing of the archetype can not be accomplished except by the voluntative and energizing influence of the soul, spirit, or mind of the builder acting among the materials to be wrought into the physical structure, which action may be either through the medium of the builder's own muscles, through the minds and muscles of others, to whom his commands may be given, or through a suitable machine which he has previously designed and prepared. And when the building is thus erected, it stands as an exact correspondent and embodiment of that particular *form* and *degree* of intelligence and volition, which were requisite to the conception of its plan, and the conjoining of its materials. After the building is finished, however, the builder withdraws all further action and influence from it, and it is left as a mass of perfectly dead and motionless materials; but could he permanently infix in it such portions or degrees of his own energizing spiritual essence as would be requisite to keep it in repair, and to constantly refine and improve it, and to develop its ultimate purposes, the building would in that case be a *living* creation.

Now it was logically proved, in another part of this work, that the Universe, or the whole great Kingdom of materiality which it comprises, is not self-existent and eternal, but that it as necessarily had a *beginning* as any human or other physical organism had—that it is therefore necessarily dependent upon an antecedent and correspondent existence as its Cause, which must have been, *not inferior*, but *superior*, to itself, even as the natural sun is superior to the plant which its beams cause to grow. Being thus superior to, and the cause of, the whole of material existence, we were forced to conceive of it as a *super*-material, *super*-universal, and hence *spiritual* Existence, of which intelligence, personality, and hence *Divinity*, are predicable.

This spiritual, intelligent, personal Divinity, whom we call God, then, being antecedent to, and the Cause of, the universal system of creation, and sustaining toward it the same relation which an earthly builder sustains toward a house proposed to be erected, must, in like manner, with the latter, have conceived in his own mind the archetypes or patterns of the universal structure, with all its included kingdoms, systems, series, degrees, species, and essential forms, from lowest to highest, before proceeding to clothe these with outer investiture. And as in the mind of the human builder, the archetypes of the proposed house are, as it were, the spiritual nuclei around which, by his own volitionary effort, the materials are made to cluster, and thus finally establish the structure as an outer creation, so in the mind of the Deity, the archetypes of the Universal Structure, of Solar Systems, of Geological Developments, of Mineral Kingdoms, Vegetable Kingdoms, Animal Kingdoms, and the universal Human creation,with all the specific and essential forms which these respectively include, were the spiritual nuclei, and pre-existent, interior realities, around which, by the force of constant Divine volition, the requisite particles and essences are made to cluster, by way of establishing them in outer and tangible forms.

Now, both with the human builder and his house, and the Divine Builder and the system of the universe, the archetypes conceived in the mind, constituted the laws or rules by which outer materials acted in their aggregations into outer forms; while, in both cases, the *force* by which those materials were impelled to act at all, originated in the volition of the Builder. Here is the difference between *Law* and *Force.* Law of itself could not create any thing, though all things were created according to Law. Force of itself could not create any thing, though all things are created by the application of Force. It is by means of Force, as an impulsive principle, and Law, as a *director* of its impulsions, that all things have sprung into being.

The idea may perhaps be rendered still more clear to some minds, by considering the whole united system of archetypes as one grand *Mould*, fashioned in the wisdom of the Builder, into which, by the direct voluntative effort of the Builder, materials are poured, by way of forming the outer structure. But without the extra proceedings of pouring the materials into it, the mould might exist for ever without giving rise to the casting, while, on the other hand, all the efforts imaginable could not give rise to the casting, did not the mould exist to receive it.

We have seen that if the human builder, in clothing his mental archetypes of a proposed structure, could permanently infix in that structure that portion or degree of the energizing influence of his own spirit, which would be requisite, by a spontaneous internal action, to keep the structure in repair, and at the same time to refine and perfect it, the structure would be, in some sense, a *living* creation. But although this is not the case with the human builder and his work, it is precisely the case with the Divine Builder and the universal Edifice which he has established. Not only does the system of creation as a Whole, but each of its included and corresponding sub-systems, contain a power of internal motion and sustentation, infused by the Creator at its origin, and which is now perpetually sustained by influx from Him, and is ever acting in parallelism with the original archetype, which constitutes its *law*. It was in view of this fact that it was argued, in another part of this work, in opposition to the received philosophy, that if the cosmical system could, by any foreign agency, become deranged or thrown out of equilibrium in any way, instead of the derangement progressing, and ultimating in a total wreck of the system, the internal forces of recuperation would be such as to soon restore the wonted equilibrium, and all things would go on as before. But on the other hand, were the Creator to withold the influx of, and withdraw, his vital energy from the universe, as soon as the momenta of existing forces and motions became exhausted, all things would necessarily come to an eternal stagnation and death!

I have said that the archetypes or pre-existent ideal patterns of each creation, are the *spiritual nuclei* of the outer forms of which that creation consists, and hence that they constitute the *laws* by which Force acts in the aggregation of substances for the development of their outer forms. Now, as it was before shown that each creation, both as to its exterior and its interior and vitalizing constitution, is seven-fold, so each creation, with its spiritual nuclei, life, and laws, is, in some sense, a correspondent and representative of the seven-fold constitution of the Deity, or the "seven spirits of God' spoken of in Revelation. Each seven-fold creation, therefore, is the same with all others as to *correspondence*, but is different from all others as to *degree;* and each one contains within itself, as its vitalizing and energizing soul, a *corresponding degree* of the seven-fold harmonies of Divine Love and Wisdom.

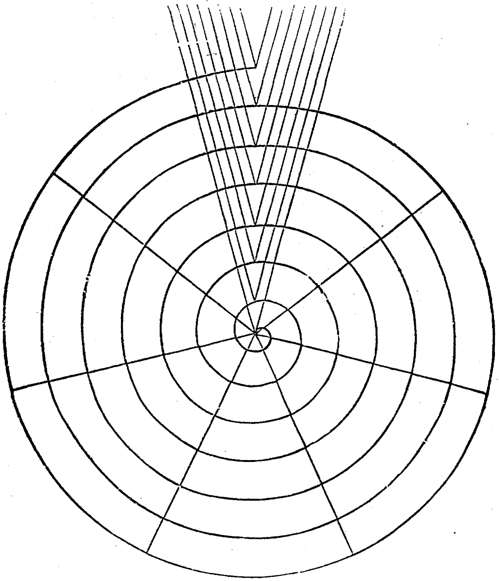
Let this latter point be distinctly understood; God exists in the universal cosmical system as its soul, but does not exist there *as* God, but only in the quality and capacity of those vitalizing and operative forces and principles of form, which were necessary to the creation, and are now necessary to the subsistence, internal motions, and constant improvement of the general creation, *as such;* in Solar Systems, God exists in the *degree* of those vital and motive forces which are necessary to them, *as such;* in planets God exists, also, in his seven-fold harmonies, but only in a degree necessary to constitute the vitality, and to originate the internal motions and other functional operations, of planets, *as such;* in the Mineral Kingdom God exists as mineral and chemical Life; in the Vegetable Kingdom, as the principle of vegetable Life; in the Animal Kingdom, as the principle of animal, instinctive, and semi-intellectual Life, but not yet as God; in the Human World he exists as the principle of human Life; but only in a perfectly integral, pure, innocent, and harmoniously constituted Man, does He exist in his focalized and quantitatively diminished, but qualitatively perfected Selfhood, *as* God. But in a discreet degree above the whole universe of outer creations, He exists in his August, Infinite, and Ineffable Selfhood, as the Alpha and Omega, the First and the Last, the Beginning and End of all things!

Though these investigations have been pursued, and these conclusions have been drawn, independently of the revelations of the Scriptures, I can not abstain from marking their perfect parallelism with the language of Paul in the following passages: "One God, who is ABOVE all, and THROUGH all, and IN YOU all."—*Eph.* iv. 6. "And he is BEFORE all things, and by him all things CONSIST."—*Col.* i. 17. "For OF him, and THROUGH him, and TO him are ALL THINGS; to whom be glory for ever."—*Rom.* xi. 36. Representing the Divine vitalizing principle flowing into, and pervading man, as taking the character of man, the same as when flowing into, and vitalizing animals, vegetables, minerals, worlds, it always takes the specific character of its receptacle—David, addressing the Deity, says, "With the merciful thou wilt show thyself merciful, and with the upright man thou wilt show thyself upright: with the pure thou wilt show thyself pure, and with the froward thou wilt show thyself froward."—*Ps.* xviii. 25, 26. This can not mean that God, in his true personal character, is any other than merciful, upright, and pure, but that his vitalizing and energizing inflowings into man (without which man would be dead, body and soul) can excite the qualities of mercy, uprightness, purity, etc., only as these comport with the character of the receptacle. It is said, moreover, that God dwells "with him who is of an humble and contrite spirit;" that is, dwells, not as a mere generator of material force and action, as he dwells in the lower creations, but dwells *as* God in his interior soul, as in a temple; while the "fullness of the Godhead" dwelt "bodily" only in that ever-to-be-admired personage, who was absolutely *without* sin, who expressly declared that he was in *unity* with the Father —that he was *in* the Father, and the Father in him, and in whose celestial purity, disinterested and unbounded love, and life-long labors and sacrifices for the good of humanity, we have the only full and true manifestation of the moral attributes of the Deity.

The foregoing will probably serve to the reader as a sufficient illustration of the various *degrees* of the Divine Principle, as now embodied in the different and corresponding Series and Degrees of the creations he has formed. The *method* of the successive origination of these various Series and Degrees of creation, has also been incidentally implied in what has been said; but as this is a point which bears upon important speculations which are rife in these days, some further illustration upon the subject may be useful.

The point to be illustrated and insisted upon is, that creation did not develop itself, either according to inherent forces of its own, nor are its development and its present internal operations, owing simply to the momenta generated by the *first impulses* impressed upon matter by the Creator, while the Creator himself retired for eternity, as one would retire from a clock that was once wound up and set a-going. In case of such retirement of the Deity, after the first impulse had been given to materials, those materials would have moved *only in the direction of the impulse*, and *only until the momentum generated became exhausted*, and creation could not possibly have passed one Elemental Degree beyond a *first* development. Hence, each superior degree of creation must necessarily have been accomplished by the aid of forces *outside* of, *superior* to, and altogether *independent* of, itself, which gave the physical elements, involved in the previous development, an upward attraction, and a tendency to aggregate in the form of the next superior series of archetypes conceived in the Divine Mind. And this is true in respect to the development of creation, as one Grand Series, and also in respect to the development of each of its corresponding sub-series.

This whole subject, with other points in our general philosophy, may be illustrated by the accompanying diagram.



Let the seven-fold triangular figure (one angle being *within* another) which descends from the upper part of the diagram, and whose *most exterior* angle comes to a point at the center of the diagram, represent a seven-fold Ray or Glory emanating from the Divine Being. This we will suppose to represent the *Complete Degree* of the Divine Soul, and Spirit, and Person, which was to generate, and to be in some sense embodied in universal creation with Man at its head. Resolved into three Discreet Degrees, we will suppose that this Ray or Glory consisted of Divine Spiritual Heat, which is Love, of Divine Spiritual Light, which is Wisdom, and of Divine Po tentializing Essence, which is the "complex, contin basis" of the preceding, and hence the medium of volitional operation. We will suppose, then (what *can not* be essentially erroneous), that from the empyrean heights of infinite perfection, where God, before creation began, had from eternity dwelt in inconceivable greatness and perfection, this seven-fold and three-fold Ray emanating from his own Person, descended by volition, and at its lowest extremity, resolved its most exterior essences (represented by the *outer* triangle) into *atomic particles*, which, in forms and constitutions, corresponded to archetypes previously existing in the Divine consciousness, and which were designed to be wrought into the structure of this universe and all it contains. Let the central point in the diagram, then, represent the *atomic* or *lowest* stage of creation, this being the physical Germ from which the great Tree of universal Being was to grow. From this central point, it will be observed, proceeds a *spiral line*, which, while constantly receding from the center, winds around through six radii, and completes the circuit of the diagram on the center of the descending Ray, on which it commenced. This spiral line, in passing around, represents the inception, progress, and completion, of the first Circle, Series, or Complete Degree of Forms. From the center of the descending Ray, and the apex of a second and more interior triangle, the same spiral line thence continues, and, completing another circuit while perpetually receding from the center, represents the course of the next higher and corresponding Circle of creations. And so, commencing every time at the point representing the completion of the previous Circle (this, at the same time, being the focus of a more interior Degree of the Divine generative Principle), it continues its corresponding circuits around the diagram, all the while expanding from the center, and thus representing the course of higher and still higher creations, until the last is attained, which is Man.

Now the descending Divine creative Ray forms the seventh radius of the circle, which represents the beginning and ending of each Series or complete Degree of creations. But the end of each is represented as *higher* than its beginning, and as in conjunction with, and subject to the operative inflowings of, the next higher Degree of the Divine generative Principle, which is represented by the apex of the next more interior triangle. Each Circle of developments traced *directly*, or from beginning to end, may be called a "line of *natural ascent:*" each circle traced *inversely*, or from end to beginning, may be called a "line of *spiritual descent*," representing the descent or operative inflowings of the Divine vitalizing and formative Energy, by which material elements involved in inferior forms are refined, energized, and brought by an *upward attraction* into next superior, and thence still superior, and finally into *highest* forms, according to the pre-existent archetypes of said forms, or their Divine spiritual patterns. Thus is the great Tree of universal creation brought through all its successive stages of development unto perfection, by constantly descending influences from the Divine *Spiritual* Sun—in the same way as the vegetable tree is made to grow from germ to ultimate, by the constantly descending influences of the *natural* Sun, which, however, is interiorly vitalized by the Spiritual. But we think it ought to be entirely obvious to every intelligent mind, that *without* these descending and vitalizing influences, *neither Tree could proceed a single step* in its ascending development; and, moreover, if at any time during the course of their development, this *superior* and *independent* influence should be withholden, the development would necessarily and immediately cease, and stagnation and decay would ensue.

If the tree can not grow without the sun, it may be considered equally certain that nature as a *whole*, and hence, also, as to its component parts, from greatest to most minute, has no power of development or motion in and of itself. Hence all power, as well as its directive influence, must be from *above* nature, and hence from God; and hence all stellar systems, solar systems, worlds, minerals, vegetables, animals, and even animalcules, were created and are governed, *not only by the remote and indirect, but by the immediate and direct, agency of God!*

These are among the considerations which we think completely overthrow the pantheistic speculations with which much of the philosophy of the day is more or less impregnated.

The diagram, also, by presenting a succession of continually expanding circles, all having one center, and being constituted after one principle, presents a clear and concise illustration of the doctrines of Series, Degrees, and Correspondences, and will serve thus to fix permanently in the mind a true idea of the complexly-unitary constitution, and harmoniously interblending movements of the universe, as expressive of the Love, Wisdom, and infinite internal harmonies of its DIVINE AUTHOR.

CHAPTER XXV.

PROVIDENCE.

THOUGH it is shown in the foregoing pages, that creation must have been developed, and must now be governed in its operations, according to directive Wisdom existing in the forms of *fixed laws*, there is nothing in the theory presented which contradicts, but every thing which confirms, those deep intuitions of every well-regulated mind, respecting the constant *Providence* of God as concerned in the unfolding and government of his creation. If, as we have seen, law of itself has no creative force, but is simply a mode of action prescribed and predetermined by the archetypes and intentions conceived in the Divine Mind; and if to the realization of each succeeding stage of creation, however great or minute, an *additional* and voluntative influx of Divine formative Energy, was absolutely necessary; and, moreover, if the same constant influx is necessary to sustain the life and motions of the system after it is in being—then it follows that every event, from the birth of a world to the falling of a sparrow, or the rustling of a leaf in the summer breeze, is, in some sense, a *Providence*—that is, it was *provided* for in the pre-determined course of Divine intelligent volition and causation. But to prevent involving creation in inextricable confusion, and to establish and preserve an orderly relationship and affectionate interblending of all forms, and a just and harmonious reciprocation in all their offices and movements, God orders even his *providences* according to laws, or, it may almost be said, he has made them *synonymous with* laws.

It may safely be believed that the present order and plan of creation is the best that could have been devised by the Divine Mind ; for otherwise, the present plan would not have been adopted. But if it is the best, then it requires no fundamental change, and not even any modifications, except such as may comport with a constant *general progression* on the basis of the original plan. But while all progression in each department is dependent upon an *influx* or inhalation (hence *free bestowment* by the Divine Being), of *additional degrees* of that Divine vitalizing influence which is specifically suitable to itself, and while all progression is in this sense *providential*, God can not, either in causing a progressional or any other change, and without deranging the established, and hence *best* possible order of things, act providentially and *directly* upon any department of creation, except *through the medium of that particular kind of force or vitality of which the thing acted upon is a suitable receptacle.*

Thus, considering the universe in its most general aspect as one grand Whole, God can not act *directly* upon it, or modify its existing activities and tendencies, except through the medium of those forces and laws of Expansion, Contraction, Circulation, Aggregation, etc., in the *degree* in which they apply to the universe as a whole. He can not act *directly* upon solar systems and worlds, except through the medium of the same laws and forces in their higher degrees of unfolding as applicable to solar systems and worlds ; God can not act *directly* upon Mineral creations, except through the forces and laws of *chemical affinities ;* He can not act *directly* upon Vegetable Kingdoms, except through the forces and laws of vegetable life ; He can not act *directly* on the Animal Kingdom, or any of its forms, except through the forces and laws of animal, sensational, and semi-intellectual life; He can act directly on selfish and sinful human nature, only by those isolated and disjointed motive forces which are adapted to reach and affect the disjointed mental and moral constitutions of selfish and sinful human beings; while God can act *directly* and *fully as* God, in all his affectional, intellectual, and moral nature, only upon a perfectly pure and sinless intelligence—a being fitted for the harmonious influx of all the affectional, intellectual, and voluntative principles of the Divine Soul—a being, hence, who stands in the perfect image of God, and who, in principle, is *one* with Him. Hence, when such a being acts (and there never was but *one* such a being), it may be said that God acts *with* him, *in* him, and *through* him, and that his every act is in the fullest and most Divine sense, a *providence.*

But as the infinite Divine, personal, and volitional Intelligence is above all things, and over all things, and is the inexhaustible Source of all streams of vitality and motive force which flow into the various departments of His creation, it may be rationally conceived, that by withholding his inflowings into the universal system as a whole, he could cause universal stagnation and dissolution to ensue; or that by increasing those inflowings, he could stimulate all firmamental developments and solar and planetary motions, to unwonted activity; or that by diminishing his influence in one portion of space, and increasing it in another, He could cause the dissolution of some worlds, and the absorption of their materials by others; or that by modifying his influences upon the electric, aerial, and subterranean forces of a particular planet (such as our own), he can cause floods to deluge the earth, or subterranean fires to overwhelm cities, and destroy such human beings as must otherwise stand as obstructions to true progress; or that in a similar way, he might cause a rarefaction of the atmosphere in one locality, and a condensation in another, and thus cause a current of wind sufficiently violent to cleave the waters of a gulf, and afford a dry passage for a particular people through whom he designed to affect great purposes.

It will doubtless still be argued that such occurrences, if they ever do take place, are results simply of the forces and laws of nature. In a qualified sense, this is granted, as we have shown before that *all* action, whether physical or spiritual, is according to some laws; but we insist that it is an exceedingly superficial view of the laws of nature, which supposes that they are self-generative and self-active, or that they can exist for a moment as separate from that Divine vitalizing and spiritual Principle which, in an earlier stage of this work, we showed was necessarily self-existent and eternal.

But if this self-existent, and all generative, and vitalizing Divine Principle may operate upon mundane forces and developments in the way just described, he may, in a similar way, control, modify, and direct chemical and mineral, or vegetable, or animal, or spiritual forces and developments, by a voluntary graduation of those influences, proceeding from himself, as adapted to either of these departments of his creation. And all such operations would be instances of *direct* providences.

But while it would be impossible for God, consistently with the fundamental, which we have presumed to be the best possible plan of creation, to act *directly* upon any *one* department of being, by forces specifically adapted only to *another* (as, for instance, to act directly upon mind, by that Degree of attractive force known as "gravitation," or to directly control planets by the motive forces of moral and rational convictions), it is none the less conceivable that each department of existence may be *indirectly* influenced through the medium of some other department, which is made the receptacle of *direct* influence. Thus it may be conceived as possible for God, by special and designed action upon a particular planet, to change the orbit of such planet, and thus *mediately* change the orbits of all the planets with which it may be associated, and thus to change their seasons, and thus their inhabitants, if they have any, and thus even to produce an endless concatenation of *spiritual* changes; or, that by action upon one particular department of the Mineral, Vegetable, or Animal Kingdom, He might change other departments of the same Kingdom, and thus indefinitely change the relations existing between them all.

Similar remarks are especially applicable to the Divine government of the *Human* world. Notwithstanding every human being, and the whole race, as one grand Man, was designed to reflect the image of the Creator, human nature, in its present state, is undeniably more or less depraved, selfish, and inharmonious, and hence is not receptive of the Divine influence, in its pure and harmonious state. The Divine spiritual influence, *directly* and *immediately* infused into the human world, therefore, and without the mediumship of a *perfect* human personage to harmoniously reflect, truly define, and correctly apply, its principles, would necessarily take a form of manifestation more or less characterized by the imperfections of degenerate humanity as its *receptacle*—in the same way as the Divine operative influence, flowing into animal or still lower creations, takes a form of manifestation peculiar to those creations. On this principle, and this principle alone, it is conceived, we may account for the imperfection of the *impressions* which the Divine inspiration gave to Moses, and David, and the prophets, and the imperfections of the code of ethics, principles of government, and policy in respect to other nations, which grew out of these impressions; for all these were evidently imperfect when judged by a *Christian* standard. Still, by means of such inflowings, as the psychical and mental constitutions of these mediums rendered possible, God, without immediately obliterating existing evils, pressed these evils into the service of ultimate good: and by arraying one nation against another, subjecting some to utter extermination, humbling others, by long disciplinary chastisements, etc., so directed the general course of human events as provide for the influx of more and more light, and for the final coming of him who was emphatically "*the* Light of the world." And now that that Light has come, a similar course of indirect Divine providences is continued with reference to nations and individuals, evidently with the view to the ultimate bringing of all under the full influence of its life-giving beams, and to the establishment of that Divine Kingdom in the world which shall "break to pieces and consume all other kingdoms, and stand for ever."

But if in this disjointed and degenerate state of the human faculties, God can discharge the highest functions of his Divine government only by bringing the appropriate forces of one human faculty, one person, one society, or one nation, to bear upon another, it is equally true that in the *perfect* man, God rules *directly*, *personally* and absolutely *as* God, in all his harmoniously consociated affectional, moral, and intellectual attributes—in the same way as he rules as mechanical, chemical, or vegetative Force, in different departments of nature without. Nay, in such a being, as the ultimate and harmonious embodiment of *all* the principles of his Love and Wisdom, God absolutely *dwells*, in his integral and *personal* capacity, as in a temple; and therefore such a being *is* God in his focalized capacity as adapted to a direct conjunction with humanity. All that authentic history informs us of the character, actions, and teachings of Jesus goes to justify the belief that he was such a divinely human and humanly divine personage.

It should be observed, that a perfectly pure and sinless intelligence, such as is here conceived, must, as viewed in a *human* aspect, stand at the very *apex* of visible creation, or at that point in a grand seven-fold circle of existence at which *endings* merge into *beginnings.* Hence, the Divine Soul, focalizing in all its harmoniously combined principles, in such a being, would maintain the same relations to inferior physical constitutions, and to all outer physical substances which lie within his sphere, as the Divine Being in his whole infinitude, sustains to the physical universe as a whole. Hence the Divinity, in this *focalized* capacity, would maintain toward all things within his sphere, the relations of a *New Beginning Principle;* and if God in his *infinitude*, as the Beginning Principle of the universe as a *whole*, could, from his free volition, make and unmake laws to govern the present system of things, then God, in the condescended form of his personal Being as manifested through a suitable human organism at the end of an old, and the beginning of a new creation, may, in equal consistency with the rules of Divine order, establish new laws, or rather enact immensely *higher degrees* of *old* ones, as relating to such existences within his sphere as need such interference. There is nothing irrational in the supposition, therefore, that the Divinely human, or humanly Divine Principle (which are one and the same), could, by volition through the outer organism which served as its medium, concentrate its vital energies upon the diseased bodies of man, and even the inorganic elements of the outer world, and produce such effects as are commonly designated by the word "miraculous," and that, too, simply according to that *higher degree* of laws specifically adapted to such operations, and unfolded for such specific purposes. Such would be instances of the highest manifestations of *indirect* providences.

But if God dwells and rules, with a perfect and harmonious display of all the principles of his nature *as* God, in a being such as we have supposed, then it follows that the more any man is *like* such a being, the more fully God "works within him to will and to do according to his own pleasure," the more he is under the *direct* operation of the highest order of Divine Providences, the more he is raised, as it were, above the sphere of mere material things and their laws, and the more he becomes a medium through which the Divine Being, in his affectional, intellectual, and volitional nature *as* such, acts upon beings and conditions *below* him, to bring them up to the true standard of healthfulness, harmony, and perfection! And when all human beings shall be fully united to God—shall fully "dwell in him, and he in them," then all human beings, with their outer conditions, and even the whole *physical* world, divinely acted upon through their mediation, will undoubtedly be spiritualized, and elevated one Discreet Degree, and peace and plenty, and that universal harmony and love, which may be considered as uncontaminated and unperverted outflowings from the Divine Fountain of Infinite Harmony and Love, will take the place of the corroding selfishness, the distracting animosities, and the physical, as well as moral, diseases and sufferings which now roll their desolating waves over the earth.

Let it be distinctly understood that the foregoing theory of Divine Providences is presented simply as a rational deduction of *philosophy*, aside from the teachings of *Scripture*. The few scriptural phrases we have employed in this disquisition, have been employed *incidentally*, solely in consideration of their appositeness, as expressing certain ideas which have lain within the course of our reasonings. Being actuated by the sole desire of developing the teachings of *philosophy*, with reference to these questions of theology, it is not pretended that we have attained to a *full* unfolding of truth upon the subject discussed, or even to so clear a presentation of that measure of truth which has been found, as might have been attained if we had freely availed ourselves of scriptural aids. But while, by the course we have pursued, our conclusions have been left unprejudiced in the view of such of our readers as may be disinclined to admit the authority of the Bible, we beg such readers, in candor, to observe, that so far as the teachings of nature and philosophy have, in these pages, been brought into view, there is *not* that hostility between them and the teachings of the Bible, which unbelievers in the latter have generally supposed to exist. The object of all investigations should be, not to establish the authority of a Book, or of a philosophical creed, but to discover Truth; and if some of the most vitally important of all truths are recorded in the Bible, it must be acknowledged, even by all *candid* infidels, that while these are *no more*, they are *no less* sacred, and while they should be received with *no more*, they should be received with *no less* avidity, than if the same truths were found any where else.

What has been said respecting Providences, will serve to give a general idea of a subject which is far from being exhausted in this discussion. Instances of apparently still more special providences, as affecting the specific conditions of individuals, can be intelligibly illustrated only in view of certain psychological and spiritual laws, which will form the themes of appropriate remark when we proceed to the consideration of the Microcosm, or the universe within.

CONCLUSION OF THE VOLUME.

We have thus endeavored to exhibit a general view of the various Series and Degrees of systematic creation which compose the aggregate of the outer realm of being—both in their separate and united capacities, together with their relations to each other and to their common Divine Cause and Governor. We close this first part of our treatise with the following remarks:

1. If our Philosophy, as to its distinctive features, contains *no* truth, it can at least do no essential evil, as it must be that a system of unmitigated error, of so bold and conspicuous a kind, and put forth in this unguarded manner, would exhibit so many vulnerable points as to meet with its death wound the instant it is exposed to the shafts of criticism. If it should be entirely overthrown, however, there would still necessarily remain some possible mode of systematizing and harmonizing Nature and Truth in one general philosophic view, if it so be that Nature and Truth are *intrinsically* systematic and harmonious; and the discovery of this mode is worthy of the highest efforts of philosophic minds. I would respectfully submit, however, that promise of a discovery of this kind, can only be given by *some* such process of serial, gradational, and correspondential reasoning from interiors to exteriors, as has been pursued in the foregoing pages; and that so long as men *confine* themselves to the ordinary processes of reasoning merely from effects to causes, so long their conclusions

will, of necessity, be more or less divergent, and so long they will, at most, be able to attain only the *body* of truth, without its *soul.*

2. If our Philosophy contains some truth and some error, then its truths, bearing as they do upon subjects of the most striking and important character, may, by exciting minds capable of elaborating and extending them, yet form the nucleus of a grand system of true thought, which may be progressively brought to a state as near perfect as may comport with the finiteness of the human mind.

3. If it contains a large preponderance of truth, and but little essential error, then considerable progress has already been made in developing the means of reconciling the jargon of conflicting thought upon all subjects natural and spiritual, and in demolishing the partition walls between the Jew of Theology on the one hand, and the Gentile of Philosophy on the other, and making of the twain one new man, thus making peace.

We are next, therefore, in the light of facts, truths, principles, laws, correspondences, etc., developed in the preceding pages, to proceed to consider a general theme of perhaps still more interest, viz., the MICROCOSM, or corresponding universe *within.* In the course of our investigations upon this subject, we shall probably speak of man physically, psychologically, individually, and socially, with a view of exhibiting his relations to all other things, his susceptibility to their influence, and the conditions of his true progress and happiness.

Should not unforeseen influences prevent, this second Treatise, or rather second part of the present one, will be ready for publication in the course of a few months.

END OF THE "MACROCOSM."

CHIRON FASCINATING ESCULAPIUS. B. C 928.

Chiron the Centaur. a prince of Thessaly, has fascinated his pupil **Esculapius**, brother prince, for the purpose of discovering a remedy to cure the foot of Hercules, which had been wounded by a poisoned arrow. An herb was prevised which saved the hero: this plant, known from the circumstance as the Centaury, (Centaur's herb,) gave name to a genus, one species of which is our common blue-bottle. Chiron was the great physician of his day, and derived his name from a Greek word, meaning the hand, because he performed most of his cures by manipulating. His wonderful skill in horsemanship has made the poets represent him as a centaur, half man, half horse. In after times, the medical fame of Esculapius far eclipsed that of his master, Chiron, and he was early invested by the people with divine honors. His mode of practising, called by his descendant Hippocrates, **the secret means of medicine, can be found detailed in the work.**

FASCINATION,

OR THE

PHILOSOPHY OF CHARMING

ILLUSTRATING

THE PRINCIPLES OF LIFE

IN CONNECTION WITH

SPIRIT AND MATTER.

BY JOHN B. NEWMAN, M.D.
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PREFACE

It is related of Epimenides, one of the sages of antiquity, that he fell asleep in a cave, and remained in that state some years. When he awoke, everything was altered around him, and he scarcely knew where he was During his absence he affirmed that he had familiar intercourse with spirits, and obtained the gift of prophecy, etc. He was reported able to dismiss his soul from his body, and recall it at pleasure. So high was his reputation for sanctity, that during a plague in Attica, 596 B. C., the Athenians sent for him to perform a lustration; in consequence of which the plague ceased.

Some German students in the last century, wishing to raise the devil, carried a pan of burning charcoal into a close room, and throwing in it various prescribed substances, danced around it, chanting a magic formula. One of them fell dead, and the rest, upon seeing his fate, fled with difficulty; the incantation, they thought, had evidently been too powerful. A professor in the same university accounted for the facts by the poisonous influence of fixed air (carbonic acid gas) generated by the ignited carbon; and offered to produce the gas at pleasure. He was instantly accused from this of having intercourse with familiar spirits.

Science has long since endorsed the professor's solution, and to doubt it at the present day would betray gross ignorance. Not so fortunate, however, was Epimenides, for it is only in our own times that his claims have been acknowledged; and from the want of more extended information, many are even now incredulous. Increasing light will induce belief, and it is my earnest wish that the following pages may tend to that result.

Man, besides soul and matter, possesses an intermediate principle distinct from and between both, called the life power: or in the words of Bonard, "he is an intelligence served by organs"—these organs being the servants of the life power, by which it operates upon the material world, and is in turn operated upon by it. A proper knowledge of the life power is a key to explain all the phenomena of fascination; and this it is the object of the present work to communicate. A very concise but perfectly clear idea of physiology is given, and on this the foundation is laid.

The Delphic priestess inhaled fixed air to act on the life power in such a manner as to cause the *spiritual* in the system to preponderate over the *material*, that she might the better give her responses. In some cases so great was the preponderance as to cause death; the priestess sharing the fate of the German student (who accomplished his desire), and by the same means. When the wished-for change is induced, new powers or instincts, previously dormant, become suddenly developed; and like the lower animals, who, when sick, run and devour the herb suited to their case, a like faculty of properly prescribing remedies is perceived—the spiritual world is often beheld, and its denizens sometimes give the sleep wakers information of events that will shortly happen. History tells us that the coming of Cortez, and his conquest of their nation, had been told the Mexicans long before a Spaniard was ever heard of; and the journals of the missionaries stationed at the Pacific isles will present similar facts.

We can now see why the brazier was used in the incantation of the student, and the probability of Epimenides undergoing a change upon entering a certain cavern (likely by accident the first time) wherein fixed air was generated. His powers of curing disease, having intercourse with spirits, and predicting events, are thus explained. It should be remarked here, that none but those predisposed to the change, can experience it; all artificial efforts to induce it, except in such, resulting in almost certain insanity or death.

Like many others in my profession, I was a bitter enemy to fascination till accidentally led to examine it; but having done so, found the phenomena it presented, though new and startling, in strict accordance with the laws of life. In explaining my views, I have written for the people, entirely dispensing with technical terms except in one or two instances. That their perusal may clear up in the minds of others as many obscure and mysterious points as they did in his own, and thus subserve the interests of truth, is the sincere desire of the

AUTHOR.

296 Fifth street New York City.

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FASCINATION

CONVERSATION I.

CHARMING.

Lady. My dear doctor, I can never sufficiently thank you for the relief you have afforded me by your treatment. I had been for years on the verge of the grave, and without the expectation of ever being, even for one day, free from pain. The first time you fascinated me, I experienced an incredible change—my pains ceased the heart beat regularly, and my appetite returned, and what is better still, my improvement has been rapid and thorough since then. I confess this freely, as it will preface what I am afraid will give you some pain. My friends attribute my recovery to imagination, and seem to think I was not really ill, but only nervous; and they suppose that a sufficient degree of irritation would make me as bad as I was at first.

Doctor. They mentioned, no doubt, many wonderful cases of the effects of imagination on the body.

Lady. Yes, and some as strange as my own The cases that had the most effect on my mind were that of Joe, the Scottish drover, who was persuaded to believe himself sick, and in consequence really became so—and would have died had not the joke been discovered to him--and that of the criminal whom the physicians pretended to bleed to death, and who actually died from the fancied loss of blood.

Doctor. That imagination exercises a powerful influence upon our bodies, is an undoubted fact; but it is equally a fact that it has full credit for all it performs. Jussieu, one of the commissioners appointed to examine this subject by the French Academy in 1784, states, as the result of a series of assiduous and attentive investigations, that he had observed *some facts* that admitted of physiological explanations; *others* which seemed to militate against animal magnetism; a *third series* of facts which he attributed to the imagination; and, lastly, *those* which could lead to *no other conclusion* than that of admitting a *particular agent* in their production.

Lady. I had no idea the subject was known as far back as 1784; I thought it a new discovery of the present day.

Doctor. We have authentic records showing its existence for upward of three thousand years. I have been examining some authorities, and, if you are sufficiently interested in the matter, will take considerable pleasure in submitting the result of my labors to you; and also explaining the connection of fascination with the laws of life.

Lady. I am very much obliged to you for the offer, and will hold you to your promise. To tell the truth, I was on the point many times of asking the same thing; for I find it to be the universal opinion of every one I am acquainted with, that, if true, it is something allied to witchcraft, and if not true, the greatest humbug of the age; and, despite my own experience, I often feel very uneasy about it.

DOCTOR. I do not wonder at your feelings; but, in relation to its effect on the imagination, I would ask if you believed in fascination before I saw you?

LADY. I had never heard anything about it. One day, when you came in and found the medicine had as usual produced no effect, after some conversation on ordinary matters, you directed me to sit down and look attentively in your eyes, at the same time taking hold of my hands. In a little time a rather uneasy feeling stole over me, which soon became pleasant and exhilarating; before long I felt sleepy, a dreamy and triumphant sensation succeeded, and my eyelids closed without the power to open them. My pains vanished, and when you opened my eyes, I felt better than I had done for years; and to the surprise of all my acquaintances, who predicted a speedy relapse, my recovery has been rapid and permanent.

DOCTOR. Well, then, your case cannot surely be attributed to imagination.

LADY. I never thought it could; but why do you name your new science Fascination? Others call it Mesmerism, or Animal Magnetism.

DOCTOR. You are mistaken in supposing it to be a separate science; it is only a part of medicine. And besides the names you have mentioned, Mental Electricity, Neurology, Pathetism, Sychodunamy, and many others, are in turn used to signify it. The forces of life, as I shall explain in another place, brook no interference from those of Chemistry or Mechanics, so that such terms as Magnetism and Electricity are inapplicable. Mesmer did not discover anything new. Neurology treats only of the nerves. Pathetism is a term derived from the Greek, meaning suffering and Sychodunamy is another word from the same language, meaning the force of the soul. Now, as we have a word in our language already expressive of the power in the lower animals, I saw no necessity to add another, especially as Fascination is universally acknowledged.

Lady. You surely do not mean the charming of snakes?

Doctor. You have exactly expressed my idea; for the power in man and the lower animals is exerted through the same medium, and produces, to a certain extent, the same results. Do you remember any cases of the fascination of snakes?

Lady. Quite a number. Professor Silliman mentions that in June, 1823, he crossed the Hudson at Cattskill, in company with a friend, and was proceeding in a carriage by the river along the road, which is there very narrow, with the water on one side, and a steep bank, covered by bushes, on the other. His attention at that place was arrested by observing the number of small birds, of different species, flying across the road and then back again, and turning and wheeling in manifold gyrations, and with much chirping, yet making no progress from the particular place over which they fluttered. His own and his friend's curiosity was much excited, but was soon satisfied by observing a black snake of considerable size, partly coiled and partly erect from the ground, with the appearance of great animation, his eyes brilliant, and his tongue rapidly and incessantly brandishing. This reptile they perceived to be the cause and centre of the wild motions of the birds. The excitement, however, ceased as soon as the snake, alarmed by the approach of the carriage, retired into the bushes; the birds did not escape, but, alighting upon the neighboring branches, probably awaited the re-appearance of their cruel tormentor and enemy.

I have read of a man residing in Pennsylvania, who returning from a ride in warm weather, espied a blackbird, and a large blacksnake viewing the bird. The latter was describing circles, gradually growing smaller around the snake, and uttering cries of distress. The bird had almost reached the jaws of its enemy, when the man with his whip drove off the snake, and the bird changed his note to a song of joy.

A gentleman himself told me that while travelling one day, by the side of a creek, he saw a ground-squirrel running to and fro between the creek and a great tree a few yards distant. The squirrel's hair looked very rough, which showed he was much frightened; and his returns being shorter and shorter, my friend stood to observe the cause, and soon discovered the head and neck of a rattlesnake pointing directly at the squirrel through a hole of the great tree, which was hollow. The squirrel at length gave over running, and laid himself quietly down, with his head close to the snake's. The snake then opened his mouth wide, and took in the squirrel's head, when a cut of the whip across his neck caused him to draw in his head, which action, of course, released the squirrel, who quickly ran into the creek.

Doctor. Dr. Good mentions the curious fascinating power the rattlesnake, in particular, has over various small animals, as birds, squirrels, and leverets, which, incapable of turning off their own eyes from those of the serpent-enchanter, and overpowered with terror and amazement, seem to struggle to get away, and yet progressively approach him, as though urged forward or attracted by a power superior to that of natural instinct till at length they enter, apparently without foreign force, into the serpent's mouth, which had all along been open to receive them, and are instantly devoured. The larger kinds of various snakes have undoubtedly a similar power. Dr. Barrow, in his Travels into the interior of South America, asserts this to be a fact, well known to almost every peasant in that quarter of the world; and Vaillant, in his Travels into Africa, affirms that, at a place called Swortland, beholding a shrike in the very act of fascination by a large serpent at a distance, the fiery eyes and open mouth of which it was gradually approaching, with convulsive tremblings, and the most piteous shrieks of distress, he shot the serpent before the bird had reached it; still, however, the bird did not fly, and on taking it up, it was already dead, being killed either by fear or the fascinating influence of the serpent, although, upon measuring the ground, he found the space between them to be no less than three feet and a half. There is a case, much in point, inserted in one of the early volumes of the Philosophical Transactions, which states that a mouse, put by way of experiment into a cage in which a female viper was confined, appeared at first greatly agitated, and was afterward seen to draw near to the viper gradually, which continued motionless, but with fixed eyes and distended mouth, and at length entered into its jaws, and was devoured.

Lady. If any of the lower animals could be fascinated by man, I should think that would be a certain proof, not only of the reality of the power, but that it did not exert its influence through the imagination.

Doctor. Animals of late days have been frequently fascinated for purposes of experiment, and a universal rigidity of the muscles produced to such an extent as to cause them to resemble pieces of statuary, so that the animal could be taken up and its whole weight supported by one foot--and this state produced and continued at pleasure. Mr. Bruce, the great African traveller. distinctly states, from minute personal observation, that all the blacks in the kingdom of Sennaar, whether Funge or Nuba, are perfectly armed by nature against the bite of either scorpion or viper. They take the horned serpents in their hands at all times, put them into their bosoms, and throw them at one another, as children do apples or bells; during which sport the serpents are seldom irritated to bite, and when they do bite, no mischief ensues from the wound. The influence exerted upon them is so great that they are scarcely ever able to attempt any resistance, even when eaten up alive, as Bruce assures us he has seen them, from tail to head, like a carrot. He also positively affirms that they constantly sicken the moment they are laid hold of, and are sometimes so exhausted by this invisible power or fascination, as to perish as effectually, though not as quickly, as though struck by lightning. "I constantly observed," says he, "that, however lively the viper was before, upon being seized by any of these barbarians, he seemed as if taken with sickness and feebleness, frequently *shut his eyes*, and never turned his mouth toward the arm of the person that held him."

This power is often used by man to disarm the fury of the most enraged or vicious quadrupeds. This is peculiarly seen at times in the case of watchdogs over whom some house-breakers have found out the secret of exercising so seductive and quieting a power as to keep them in a profound silence while the burglary is committed. Lindecrantz, of Sweden, tells us that the natives of Lapland and Dalarne are in possession of this secret generally, insomuch that they can instantly disarm the most furious dog, and oblige him to fly from them, with all his usual signs of fear, such as dropping the tail, and becoming suddenly silent.

Grooms are sometimes found possessed of a similar power over horses. Mr. Townsend gives a striking anecdote to this effect in his account of James Sullivan. The man—an awkward, ignorant rustic of the lowest class—was by profession a horse-breaker, and generally nicknamed the *whisperer*, from its being vulgarly supposed that he obtained his influence over unruly horses by whispering to them. The actual secret of his fascinating power, it is very likely, was unknown to himself, for it died with him, his son, who was in the same occupation, knowing nothing of it. It was well known to every one that, however unbroken or vicious a horse or even a mule might be when brought to him, in the short space of half an hour he became altogether passive under his influence, and was not only entirely gentle and tractable, but in a very considerable degree continued so, though somewhat more submissive to himself than to others. There was a little mystery in his plan, but unquestionably no deceit. When sent for to tame an unruly horse, he ordered the stable-door to be shut upon himself and the animal alone, and not to be opened until a given signal. This singular intercourse usually lasted for about half an hour; no bustle was heard, or violence seemingly had recourse to; but when the door was opened, on the proper sign being given, the horse was always seen lying down, and the fascinator by his side, playing with him familiarly as a child with a puppy. Mr. Townsend once saw his skill tried on a horse that could never be brought to stand for a smith to shoe him. The day after Sullivan's half-hour lecture, he went, not without some incredulity, to the smith's shop with many other curious spectators, who were eye-witnesses of the complete success of his art. This, too, had been a troop horse, and it was supposed, not without reason, that after regimental discipline had failed, no other would be found availing. He observed the animal seemed afraid whenever Sullivan either spoke to or looked at him. In common cases, the mysterious preparation of a private interview was not necessary, the animal becoming tame at once.

Lady. Has no person ever attempted to explain this wonderful influence? for the facts seem to have been known a considerable time.

Doctor. Yes, though some have doubted the facts; for, as Dr. Good remarks, in the marvellous it is always far more easy to doubt than to determine. By far the best explanation, and one with which I entirely coincide, is that of Major A. Gordon, of South Carolina, the rationale of which I will enter upon after a little time. In a paper of his, he attributes the fascinating power supposed to be possessed by serpents, to a vapor which they secrete, and can throw around them to a certain distance at pleasure. He advances various facts in support of this opinion, and observes that the vapor produces a sickening and stupefying effect; and alludes to a negro who, from a peculiar acuteness of smell, could discover a rattlesnake at a distance of two hundred feet, when in the exercise of this power, from his smell being effected by it, and who, on following such indication, always found some animal drawn within its vortex, and struggling with its influence.

LADY. Does man possess the power of throwing off a similar vapor?

DOCTOR. Undoubtedly; the instruments in both are the same, and these instruments I will take occasion to describe to you, and explain their mode of operation.

LADY. I should think it possible, in that case, for animals, in some instances, to fascinate man.

DOCTOR. We have well-attested instances of their doing so. I remember reading, some time since, of a man walking out in his garden, who accidentally saw a snake in the bushes, and, observing the eyes gleam in a peculiar manner, watched it closely, but soon found himself unable to draw his own eyes off. The snake, it appeared to him, soon began to increase immensely in size, and assume, in rapid succession, a mixture of brilliant colors He grew dizzy, and would have fallen in the direction of the snake, to which he felt himself irresistibly impelled, had not his wife come up, and, throwing her arms around him, dispelled the charm, thus saving him from certain destruction. There are too many of these stories to mention a tithe of them; so I will conclude with but one more that is very generally known. Two men in Maryland were walking together, when one found fault with his companion because he stopped to look at something by the road-side. Perceiving he did not heed him, he returned to draw him along, when he perceived the other's eyes were fixed upon a rattlesnake, which had its head raised and eyes glaring at him. The poor fellow was leaning toward the snake, and crying piteously, in a feeble tone, "He will bite me! he will bite me." "Sure enough he will," said his friend, "if you do not run off. What are you staying here for?" Finding him dumb to all entreaties, he struck down the snake with a limb of a tree, and pulled his companion violently away. The man, whose life was thus providentially saved, found himself very sick for some hours after his enchantment.

Lady. I must express my astonishment at the new light in which you have presented the whole subject to my mind. There can possibly be no cavilling at any of the positions you have assumed.

Doctor. I give you the result of my own conclusions, after considerable study, and, from what has been shown, I think we may prove four things:—

First: That man can fascinate man.

Second: That man can fascinate the lower animals.

Third: That the lower animals can fascinate one another.

Fourth: That the lower animals can fascinate man.

Townsend remarks, that if we wish to seek for a general instance of the power one human being possesses over another, with regard to the influence of fascination, we have only to look at the effects produced when young persons sleep with old. It is recorded of the Psalmist, King David, that, when he became very old, he got a young damsel to sleep with him, that, from her vigorous life, he might obtain a supply to lengthen out his days. Some painful instances of this kind came under his own observation—one in which the future well-being of a person very dear to him was compromised; and he was acquainted with an infirm old lady, who was so perfectly aware of the benefit she derived from sleeping with young persons, that, with a sort of horrid vampireism, she always obliged her maid to share the same bed with her; thus successively destroying the health of several attendants.

The celebrated German physiologist, Hufeland, has remarked the longevity of schoolmasters, and attributes it to their living so constantly amid the healthy emanations of young persons.

It may be well to mention, in this connection, the fact that savage nations, generally, practice fascination. They rub or pat one another when fatigued, and it refreshes. The wife of one of the Sandwich Island missionaries, on a visit to this country, some years since, exclaimed, on returning from a long and tiresome walk, that had completely exhausted her strength: "If I was home, the native women, by patting me, would soon give me complete relief from this weariness, and make me feel as lively as ever." The rites and gestures of savage magicians, the medicine-men of the wilds, over their patients, which so much alarm travellers, are nothing more than fascinating passes to cure disease—a method, too, that very generally succeeds.

Even among animals, it has been found that the young cannot be too closely associated with the old without suffering detriment. Young horses, standing in a stable beside old ones, become less healthy, and, in time, weak and sickly.

Lady. And you say these wonders can all be explained, in accordance with what is already known of the laws of life?

Doctor. With the utmost certainty.

Lady. But do you really think it possible that I can ever understand them? I am fearful that I have not strength enough of mind to pry into such mysteries.

Doctor. The subject is not difficult, by any means, and a moderate degree of perseverance is only necessary to master the whole. If you like, we will spend a little time to-morrow in its examination, and, in the meanwhile, I will leave you Mrs. Abdy's lines on fascination, which prove, in a pleasing enough manner, that there can be some poetry in the subject:—

He stands before a gathered throng, strange knowledge to unfold,
Charming the dazzled fancy like the fairy-tales of old;
Yet must he brook the idle jest, the cold and doubting sneer,
He hath no beaten path to tread, no practised course to steer.

The wondrous science that he strives to bring to life and light,
Is softly, faintly breaking from the misty shades of night;
And scoffing prejudice upbraids the pure and genial ray,
Because it doth not burst at once to bright and beaming day.

He tells the healing benefits that through this power arise;
How sweet and soothing sleep may seal the weary mourner's eyes;
How raging madness may be checked; how sufferers may obtain
The boon of deep oblivion from the keenest throbs of pain.

Anon he dwells on loftier themes, and shows how mind may claim
An empire independent of the still and slumbering frame.
Can ye doubt the proofs, ye careless throng, submitted to your view
Can ye hold them in derision, because yet untried and new?

Know that improvements ever wend a tardy course on earth;
And though Wisdom's mighty goddess gained perfection at her birth
Her children reach by slow degrees the vigor of their prime,
For the wisdom of this lower world requires the growth of time.

None wish ye on the statements of a single voice to rest;
The marvels ye have witnessed ye are urged to prove and test;
Survey them in their varied forms—inquire—observe—inspect—
Watch—meditate—compare—delay—do all things but neglect!

If ye bear in mind the lessons that to-day ye have been taught,
Ye need not lack materials for intense and stirring thought;
And my simple lay can little aid an orator's discourse,
So gifted with the energy of intellectual force.

But I ask ye if your cherished ones sharp anguish should endure,
Which the stated arts of medicine had in vain essayed to cure;
Would it not grieve ye to reflect ye might those pangs allay,
But that, jestingly and mockingly, ye cast that means away?

Mistake me not—I prize not aught, however great or wise,
If held not in subjection to the God who rules the skies;
To me all knowledge would be poor, all splendor would be dim,
All boons unsafe, all joys untrue, unless derived from Him.

And if eagerly this wondrous power I witness and approve,
It is because I know no bounds to Heaven's amazing love.
And I cannot, by the pedant rules of critic caution, scan
The depths of those exhaustless gifts His mercy pours on man

CONVERSATION II.

DISCOVERY OF FASCINATION.

DOCTOR. I wish to prove, in our conversation to-day that Adam was perfectly aware of the power of fascination, together with clairvoyance, and those other mysteries that astonish so much the people of the present day.

LADY. Why did he not communicate this knowledge to his descendants, so that the matter might become universal and undoubted?

DOCTOR. I cannot answer better than in the words of that veritable historian, John Bunyan, who tells us that King Shaddai, in the sixth day of the year one, built in the country of Universe a fair and delicate town, called Mansoul, and endowed it with corporate privileges—a town for building so curious, for situation so advantageous, that there was not its equal on the face of the whole world. Yea, it was so goodly, when first built, that the gods, at the setting up of it, came down to sing for joy. It was so mighty as to have dominion over all the country round about it; for all were required to acknowledge it for their metropolitan, and do it homage. It had commission and power from the king to demand service of all, and also subdue those who in any way opposed it.

There were certain gates in Mansoul, by which access could be gained to the celestial country round about it, and communion held with the messengers who were constantly coming and going from the court of Shaddai. The inhabitants took full advantage of all their glorious privileges, and conversed with the gods freely, so that, all the time they continued under the dominion of its builder, nothing but sounds of joy and praise were heard; but when, as is well known, they rebelled against his government, and swore allegiance to Diabolus, his enemy, a dreadful change came over them, and, among the other enjoyments of which they were bereft, the gates were closed that opened to the celestial country, and no communication through them, unless under extraordinary circumstances, ever allowed. As the gates became disused, they were gradually forgotten by the many, and, for thousands of years, all remembrance of them lost.

Lady. Why, you do not surely think that heaven is around us, and that, if we could see through those gates, we would behold its glories at once? I have always entertained the idea that the celestial country was an immense distance off, and, when we died, there was a long journey to travel before it could be reached.

Doctor. That the material world is contained in the spiritual, admits of direct proof, and a little reflection will convince us at once of the fact. You know we are told, that the angels that encamp round about them that fear the Lord, do always behold the face of our Father which is in heaven. And were our senses not holden until the time when we shall be caught up to meet the Lord in the air, we might see the cloud of witnesses surveying our heavenward race, and behold, as Stephen did when he was martyred, heaven opened, and Jesus sitting at the right hand of God.

Lady. I must confess it would please me better to and some certain proof of this in the Bible, and also of some one who had seen it, that would be immediately convincing.

Doctor. You will be surprised, then, by an attentive examination of the sixth chapter of 2 Kings. When Elisha's servant perceived his master's house surrounded by the warriors of the king of Syria, who evidently came with a hostile intent, he was extremely frightened, and cried, "Alas, my master! how shall we do?" And Elisha answered and said, "Fear not; for they that be with us are more than they that be with them." But as this did not quiet him, Elisha prayed, and said, "Lord, I pray thee, open his eyes, that he may see." And the Lord opened the eyes of the young man, and he saw; and, behold, the mountain was full of horses and chariots of fire round about Elisha.

Lady. I am satisfied, but cannot help expressing my astonishment at the clearness of all the proofs you bring forward to sustain your positions. Do you suppose they practised fascination before the deluge?

Doctor. Though they might be aware of the existence of the celestial gates, yet that the mode of opening them, and also producing curative influence, was known before the flood, it is, of course, out of our power to determine; but that it was soon manifest after that period, is undoubted.

Though the immediate descendants of Noah were aware of the being, and some of the attributes, of Jehovah, yet their knowledge, handed down to posterity only by tradition, became corrupt, and the invisible and eternal One was lost sight of in the homage paid to things of wood and stone; the charge of which, involving, as it did in their eyes, communion with superior powers, was the most important office in the nation, and one, too, which it was the earnest endeavor of all to obtain. Now, who so likely to obtain it as those who pretended to be especial favorites of the gods themselves, proving their assertions in the most satisfactory manner by the cure of diseases. Accordingly, we find the heathen priests were the first fascinators.

LADY. But how did they discover the mode of doing it?

DOCTOR. An attentive examination of the subject has brought me to a conclusion that, most likely, will very much surprise you. I think the requisite knowledge was imparted by Satan himself, either in a direct manner, or by prompting the mind to a series of experiments that led to the discovery. He did this to increase his influence, so that a chosen few, on whom he could depend, might guide the many in the ways of destruction Proof of this, I think, can be found in the fact, naturally abhorrent to humanity—for man has been defined to be a religious animal—that all barbarous nations pay more homage to the Spirit of Evil than they do to the Spirit of Good. And, as a matter of course, their rites of worship are of the most revolting and blood-thirsty description; extreme licentiousness characterizing their devotions, as well as suspension by hooks, etc., and the murder of infants and adults.

LADY. If fascination is a power imparted by Satan why is it not sinful to have recourse to it?

DOCTOR. He did not impart the power, but merely showed the fact of its existence. It is a gift from Jehovah, and, as such, with all thankfulness, we make use of it to subserve his honor and glory The Lord makes he wrath of man to praise him as wel as the wrath of

Satan, who will no doubt find it in the end, like many other of his projects, one of the most efficient means of his overthrow.

Uniting, as the heathen magi did, the offices of priest and physician, as well as king, (which last office they afterwards voluntarily separated, though they kept it subordinate to their own,) and the number of known remedies being then very few, they were mostly compelled to rely on fascination for giving relief in sickness. Some of them possessed this power in so extraordinary a degree, and had their fame so widely extended, as to be deified after death; having idol statues shaped in their likenesses, to which divine honors were paid, the qualities for which they were thus honored being symbolized by an additional number of arms. Proofs of this may be seen at the present day in the images of the gods of India; Vichenow, Chiven, Parachiven, Ravenna, and many others, have four, six, and twelve arms, all presenting the hands open, with the palms inclining downwards, the fingers being in the most approved fascinating positions of the present day.

It is probable that the immediate application of the hands was reserved for special purposes, curiously-shaped rods of various kinds being mostly used to direct the influences; thus the caduceus of Mercury, it was supposed, had the power of putting any one whom it touched to sleep; with it he deepened the slumbers of Argus, after lulling him to a gentle repose by the sound of his lyre, preparatory to cutting off his head. That he sometimes dispensed with its use is evident from a passage in Plautus, which makes him say of Sosia: "What if I stroke him gently with the hand so as to put him to sleep?" May not the regal sceptre have been used, before the separation of priest and king, for the same purposes as the caduceus of Mercury, and be, as well as the *royal touch* for the cure of scrofula, the last remains of the former union of offices?

LADY. Nothing can be more probable in this view of the subject.

DOCTOR. The magi, or wise men of India, the most ancient fascinators of whom profane history gives any account, practised mostly gestures and manipulations in curing disease, though they often prescribed herbs.

LADY. Is any particular account given of their curing by fascination?

DOCTOR. Philostratus mentions the case of a young man, whom a lion had injured in the knee to such an extent as to keep him in constant agony, and who went to the magi to obtain relief. They rubbed him gently with their hands at intervals during a few days, when he returned home perfectly cured.

Next come the priests of Egypt, who took the greatest possible advantage of the secret, and made the knowledge of it the last and holiest rite of their ancient magic, in the initiation of candidates. So celebrated were they, that many persons, taking advantage of our Saviour's temporary residence in Egypt, professed to account for his miracles, by accusing him, according to Arnobius, of being a magician; of making things by secret means; and of stealing, from the sanctuary of the Egyptian priests, the names of the powerful angels, and their occult disciplines.

Patients flocked to these Egyptians from all parts of the world. Their mode of proceeding was to previously prepare them by means of fasting and prayer, and then wrap them up in goat skins. After the process of fascination they were left to wait for sleep and prophetic visions; in some instances these did not occur, but to provide for the emergency, there was a company of priests who slept for them, and revealed the dreams. A record of each case, telling the name of the person, the disease and the remedy, was engraved on the temple; and these inscriptions, we are told, were, for a long while, the sole record of practical medicine. Five of these have been translated, the following two of which will give an idea of what they were:

The god, in a nocturnal apparition, ordered the son of Lucius, who was attacked with a hopeless pleurisy, to take from the altar some cinders, and, mixing them with wine, make an application to the affected side. He was saved; he thanked the god, and the people wished him happiness.

A blind soldier named Valerius, after consulting the god, received for answer: "Go in the temple, mix the blood of a white fowl with honey, and wash your eyes with it during three days." He recovered his sight, and thanked the god before the people.

Lady. What does it mean when it says they waited for visions?

Doctor. I must take a rather circuitous mode of answering your question. We must now study a little physiology, and, as I will avoid all hard names, and endeavor to simplify as much as possible, you will not find it difficult to follow me in the explanations.

Man has three perfectly distinct elements in his composition—Matter, the Life Principle, and the Soul or Immortal part.

Lady. I thought life resulted from the union of all the different organs, and that their being placed in just such relations made the machine work harmoniously.

Doctor. That has been, and even now is, the opinion of a great many, but when the system is growing, and also in disease, some parts are always out of relation to the rest, and the proportion and balance thus utterly destroyed; and did life only result from the union of all, it must cease in such cases at once to exist. The inductive and only true method of reasoning refers the various operations going on within the body to a common cause, which source of action is called the life or vital principle.

Lady. But how is this cause discovered?

Doctor. By the phenomena it presents to us; we can perceive these phenomena only through the agency of Matter, for which purpose alone, it would seem, matter was created.

Lady. As matter is governed by laws of its own, it appears to me that, in experimenting upon it, you would only be finding out those laws.

Doctor. The laws of matter, which are known as the chemical and mechanical forces, differ entirely from those manifested by it when organized.

Lady. Still I have not a clear idea of the vital principle. When I would separate it from the soul and matter, the two last continually force themselves upon my mind, and make the whole subject very confused. If it was only possible to observe the vital principle acting with matter alone, without the soul's interference, I could easily understand it.

Doctor. Your wish can at once be gratified, by looking at the geranium on your window sill. Vegetables have only the vital principle and matter; but perhaps I cannot do better than refer you to an article on this subject prepared by myself for a literary magazine some years ago. Will you read it aloud?

Lady. It was remarked by a philosopher, some years ago, that it was scarcely possible to tell the difference between a dog and a rose. This statement, to the greater number of my readers who have not reflected on the subject, will appear hardly probable. Anecdotes of the sagacity and faithfulness of dogs are known to all; and I doubt not many of them in our city are possessed of more knowledge and practical information, and are better members of society, than the swarms of idle and vicious youth who crowd our streets. How then, with such facts before him, could Bonnet make such an assertion? I will tell you. Our ideas of the intelligence of animals are derived from the proofs of design we see them exhibit. Having a certain end in view, they will choose, with the most astonishing discrimination, out of a number of means, the ones best adapted to their purposes, and contrive to use these in such a way as to be almost uniformly successful. Natural history is made up of facts in support of this position. Our next inquiry will be to find out whether plants ever show such instances of choice and foresight and a little examination will prove that most unquestionably they do.

Strawberries, planted on moist ground, give out no runners; but, on placing them in a dry soil with water at some distance, we find runners travelling around until they discover it, and then remaining—a living aqueduct—to supply the plant. If these runners are moved round to the other side, they will soon regain their original position with unerring certainty. If you turn the under surface of a rose-leaf upward, it will, in a little while, commence a return movement, gently twisting, with a kind of effort, on its peduncle, as on a sort of pivot. The Abbé Martin transplanted a rose-tree from one part of his garden to another, for the purpose of experiment. To the right of the new position, the soil was hard, dry, and sterile; to the left, moist, rich, and tender. The roots, at first, radiated alike to the right and left. But he soon discovered that the roots, which had advanced to the right, bent backward toward the fertile and mellow earth, as if divining that their companions at the left had found better pasture. To prevent their intercepting nourishment intended for other plants, he dug a ditch to stop the farther advancement of the roots. Arrived at the ditch, they plunged perpendicularly below its bottom, ran around and advanced anew toward the point whence they had discovered the rich soil.

Instances of their foresight in guarding against excessive heat, wind, and rain, are equally numerous In France, the peasants train the carlina by their doors. to serve as a barometer; its open flowers show clear weather—but closed, an abundance of rain. The shepherd's weather-glass has the same property. If it does not show its face to greet the sun on his ascension, the sheep remain in the fold on that day. The four-o'clock opens its flowers regularly every afternoon at that hour, to show the laborer that, if he cannot afford a watch, nature will provide him with the means of knowing the hour without expense. Such examples certainly prove a faculty of judging according to the sense in plants.

And now the inquirer asks, "What is the nature of this principle, and in what does it differ from chem ical affinity or attraction?" A perfect exemplification of this difference is given in the history of its creation. And God *made* every *plant* of the field *before* it was in the earth, and every *herb* of the *field before it grew.* Dry land and seas, by this time, were divided, and the forces of the inorganic world in operation. These forces are called pullers-down of nature. Exposed to their influence, mountain and hill crumble to dust; and it is owing to their agency that volcanoes and earthquakes destroy cities and swallow up nations. This is due, probably, to the shape of the ultimate atoms, which, fitting into each other in different ways, occasion perpetual change.

But on the third day, a controlling influence, a new set of powers, the builders-up of nature, appear—created, in kind and degree, different from matter, yet only manifesting their presence to us in connection with it. So far from allowing these atoms to unite according to their affinities, which would soon destroy nature, they exercise the most despotic sway, controlling them to the last. The chemical forces are in perfect subjection while life remains; but the moment it departs, dust returns to dust, the work of destruction begins, and the body vanishes into air

A beautiful example of this opposition is shown by seeds, which are the simplest independent forms of the union of the life power with matter. Take two of these, and, having destroyed the vitality of one of them by passing an electric spark through it, place both in warm and moist earth. The dead seed, surrounded by all the conditions favorable to its decomposition, is speedily resolved into its native elements, while the living one makes slaves of its enemies, rapidly sprouts up amid the surrounding desolation, and hangs out its flowery banners as tokens of victory. Seeds retain life, almost any length of time. I noticed, this week, an account of an abundant harvest reaped from the growth of seeds found in an Egyptian mummy, over two thousand years old.

A seed, finding itself in a warm moist place, suddenly becomes aware that it has work to do, and sets about it without delay. The seed-case bursts, a stalk and leaves appear above, while the root, sending off filaments, remains below; at the end of each of these little filaments is a spongiole, or bundle of leech-like mouths. These suck from the soil whatever they require, and then act the part of a stomach in instantly digesting it. A series of ascending vessels, or veins, are ready to carry it to the leaves, to be further elaborated; when it arrives there, its oxygen is given off, and a supply of carbonic acid, obtained from the air, is combined with it; and the pure blood, or sap, is carried by the arteries to every part, to supply its necessities and form compounds.

Plants are manufacturing establishments; some make the essential oils—as the cinnamon, sassafras, and rose; others salts—as the sorrel, oxalic acid; the Peruvian bark-tree, quinine; and the willow, salacine. Many a despised shrub has powers more deadly and dangerous than a powder magazine; the laurel and peach yield prussic acid, one drop of which will destroy life; and travellers tell us that the atmosphere of the upas-tree is fatal for miles around it.

The vital principle of each plant, being separate and independent in itself, explains the reason why two of them—the one a virulent poison, the other a table vegetable—will grow side by side, and draw their nourishment from the same source. It also shows the error of our modern agriculturists, who treat these living existences, endowed with a power of choice and foresight, as if they were tubes, imbibing whatever was placed near them by capillary attraction.

Man resembles a torch, in requiring oxygen to keep him burning or alive; in return for this he throws out carbonic acid, which to him is a virulent poison. Now, what prevents this gas accumulating in the air, and destroying the animal kingdom; and from what source shall the supply of oxygen be derived to answer our continual demand? Only from the respiration of plants; which we may now see not only supply us with food, but are absolutely necessary for our daily existence.

When the new Custom House and Merchant's Exchange were erecting, they were the daily resort of thousands who flocked to witness their gradual progress; yet how much more wonderful is the building of a vegetable palace! Unseen workmen are urging it forward with untiring industry; column after column forms; story after story rises; staircase and hall and gallery are soon fixed in their positions. We think it a great thing to have the Croton water brought into our houses; yet in every one of these little chambers, there are pipes to carry food and water and take away the residue. The vegetable house is made of the finest wood, is elastic, and capable of bending to the breeze; and, to defend it from the rain, covered either with water-proof varnish, or stuccoed over with the rares porcelain. And all this time the spectator is not disturbed by noise or dust, the greater part of the work being carried on under ground.

When all is completed, no monarch on earth could obtain such a residence. The very paint of its walls, though exposed to all kinds of impurity, is of such rare quality that the king's stateliest robes cannot match it. "Consider the lilies of the field; they toil not, neither do they spin; yet Solomon, in all his glory, was not arrayed like unto one of these." Nay, kings are even glad to obtain its essences at second hand, to perfume themselves.

The name of the inhabitant who owns the house is written on a broad door-plate of surpassing beauty, so that we can tell one from another. Books have been written on the language of these door-plates or flowers, and it is said that angels, by their means, write mysterious truths on hill and field. The poet, from the earliest ages, has held the most sweet and loving converse with them. But to the physician, the priest of nature, they speak in a higher and more exalted strain. In them he reads the success of his mission. By their means he can conquer the most obstinate diseases. That nothing has ever been formed for show alone, the truly useful will always be the truly beautiful. That when their uses are perfectly understood, the fond dream of the Rosicrucian shall not want verification: the bone shall continue firm and the muscle strong; the eye of youth retain its lustre; and as century after century passes away, the lapse of time shall but witness our triumph over the pullers-down of nature, and our increase in wisdom and love. These happy children of Flora, that have retained undimmed the influence of their Creator's smile, when first he pronounced his work good in Eden, shall receive added radiance and more dazzling glory as they again behold His face in the dawning morn of the millenium

CONVERSATION III.

PHSYIOLOGY.

Doctor The body is the house of the soul: in an upper story, confined to an inner chamber, closely imprisoned, and having no communication with the external world, except through the medium of the life principle, resides our immortal being.

Lady. But there is no mention of a double life in the account of man's creation. Genesis ii, 7, says that the Lord God formed man out of the dust of the ground, and breathed into his nostrils the breath of life; and man become a living soul.

Doctor. The Hebrew word, in that passage, for life, is used in the plural; so that your objection but confirms the physiological view. It should read, breathed into his nostrils the breath of lives.

Lady. Is the life principle immortal as well as the soul?

Doctor. I believe it is, but only in consequence of its connection with the soul, to which it is subservient. It is an intermediate between spirit and matter, presenting to us certain phenomena, by which we are enabled to recognize its possession of seven distinct properties; these are:—

Vital Affinity
Vivification.
Mobility.
Irritability.

INSTINCT.
SYMPATHY.
SENSIBILITY.

The first five are common to all animated nature—plants as well as animals; the last two, in consequence of requiring a nervous system for their development, belong only to animals.

Vital affinity and vivification are used in the organization of matter. Mobility is the power of originating motion, as shown in the circulation of the sap and shrinking of the mimosa. Irritability, or excitability, is the power of giving and receiving impressions—of acting upon matter, and of being, in turn, acted upon by it—and is one of the most important of all. The instinctive property of plants has been already mentioned; that of animals needs no illustration. Sympathy and sensibility possess names sufficiently explanatory of their powers.

LADY. But have not animals a separate principle of instinct besides a life power?

DOCTOR. They have not. Coleridge, who is the best authority on this subject, remarks that instinct is the *power of selecting and adapting means to proximate ends;* and illustrates the point by taking the stomach of a caterpillar, which, he observes, has the power of selecting the appropriate means (that is, the assimilable part of the vegetable *congesta*) to the proximate end—which is, the growth or reproduction of the insect's body. It does this by the vital power of the stomach.

From the power of the stomach, he passes to the power exerted by the whole animal; traces it, wandering from spot to spot, and plant to plant, till it finds the appropriate vegetable; and again, on this chosen vegetable he marks it seeking out and fixing on the part of the plant, bark, leaf, or petal, suited to its nourishment—or (should the animal have assumed the butterfly form) to the proper place of depositing its eggs, and making provision for the sustenance of the little animals that shall emerge from them. The power, thus exhibited, of selecting and adapting means to proximate ends, according to circumstances, he considers as a higher species of adaptive power, and calls it Instinct.

Then, citing anecdotes from the writings of zoologists, he proves in the lower animals a power of selecting and adapting the proper means to the proximate ends, according to varying circumstances; and this yet higher species of adaptive power he calls Instinctive Intelligence.

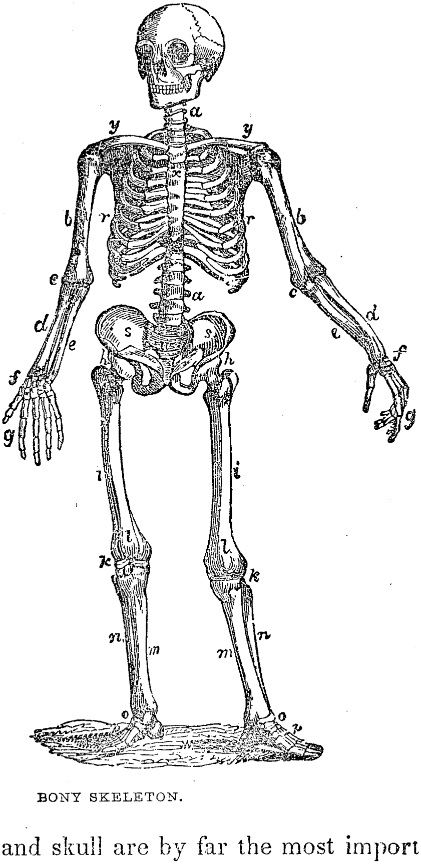
In addition to these, he says that he finds one other character common to the highest and lowest; namely, that the purposes are all manifestly predetermined by the peculiar organization of the animals, and both actions and purposes are in a necessitated reference to the preservation and continuance of the particular animal, or the progeny. There is selection, but not choice; volition, rather than will.

Lady. I suppose wild men have their instinctive faculties best developed, and that man, in proportion as he becomes civilized, or under the dominion of reason, loses those powers.

Doctor. You must remember that the manifestations of instinct depend on the peculiar organization of the animal. Man is not fitted to live in a wild state, for then he is, of all animals, the most helpless. But Coleridge speaks directly on this point, and I will give you his words, premising that he defines understanding as the faculty that judges by the senses. He says, that if we suppose the adaptive power, in its highest state, (instinctive intelligence) to co-exist with reason, free-will, and self-consciousness, it instantly becomes understanding; in other words, that understanding differs, indeed from the noblest form of instinct—not *in itself, or in its own essential properties*, but in consequence of its co-existence with far higher powers, of a diverse kind, in one and the same subject. Instinct, in a rational, responsible, and self-conscious animal, is understanding.

Having now reviewed the characters of the servants in the house of the soul, we will glance at their offices in the building, and at the building itself. In comparing the human frame to a self-moving house, the bones and muscles should be represented as beams and pillars; the stomach as the kitchen; the lungs as the ventilator, etc. etc. The house must be furnished with bells and wires to convey news, receive messages, and connect all the parts together into a common whole; such offices are performed by the senses.

The skeleton of the human body is composed of two hundred and forty-eight bones; each of which is modelled with the utmost care for the various offices it has to perform; and so close a relation does one bone bear to another, that an anatomist can tell from seeing one, or in some cases, even a part of one, with the utmost certainty, the general form and habits of the animal to which it belonged. A happy illustration of this fact was shown some years since in England, by Mr. Conybear, a philosopher of considerable eminence. Having found a few bones of an extinct species of animal, he set himself to work to construct the perfect skeleton. Little attention was paid to his performance at the time, but some years afterward, a complete skeleton of that singular animal, the Plesiosaurius, was discovered, and found almost exactly to correspond with Mr. Connybear's drawing!



[*a a*, spinal column capped by the skull; *r r*, ribs connected by gristle (cartilage,) to the breast bone, *x*; *y y*, collar bones (clavicles); *b*, the arm bone (humerus); *c*, the elbow; *d*, the radius; *e*, the ulna; *f*, the wrist joint (composed of 8 small bones, in two rows); *g*, the finger bones (phalanges, 19 bones); *s s*, hips or pelvic bones, joining *w*, the sacrum; *i*, the thigh bone united to the trunks of the body by the joint *h*; *l*, the knee-pan (patella); *k*, the knee; *m*, the tibia, and *n*, the fibula, both small bones of the leg; *o*, ancle, composed of 7 bones; *p*, toe bones (phalanges, 19 bones)]

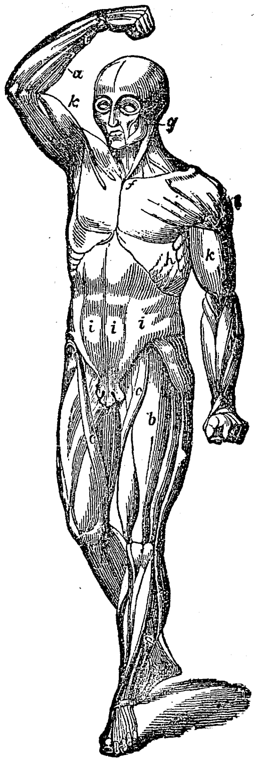
BONY SKELETON.

The back bone and skull are by far the most important among the bones; they are the caskets in which are deposited the spinal marrow and brain—indeed, to protect the nervous system from injury seems, in every instance, the first intention of the formation of a skeleton.

The spine, or back bone, is composed of twenty-four smaller bones, between the most of which is a layer of gristle, so that while the indispensable condition of great strength is preserved, a degree of motion is allowed. The weight of the upper parts of the body, presses down this gristle during the day, thus accounting for the singular fact that persons are always shorter at night than in the morning soon after getting up. The loss in height in different individuals varies from half an inch to one or two inches.

Lady. I know a gentleman who habitually loses in height from one-half to three-quarters of an inch every day; and, while speaking on the subject, told me an anecdote relative to the practice pursued by British recruiting sergeants, who, when they found a man willing to enlist, not more than half an inch under the requisite height, made him lie in bed and fed him well for two or three days, by which time his gristle became well swelled out, and he was almost invariably sure to pass muster when immediately presented at the station house.

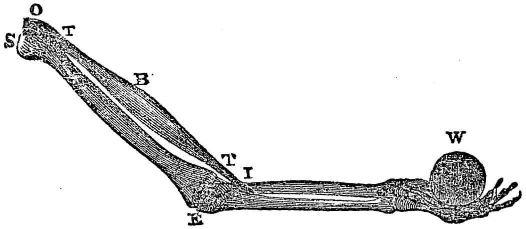
Doctor. Every little protuberance and ridge we see on bones give origin or hold to muscles, which attach themselves to them by means of strings or tendons. There are nearly five hundred distinct muscles named by anatomists in the human body. This is probably underrating the real number, for a caterpillar has over four thousand muscles, and there are one thousand in the proboscis of an elephant. Muscles are composed of layers of cellular tissue, the compression of which at the ends forms tendons; while the cells in the middle are filled with fibrin.



MUSCULAR SKELETON.

[*f g* is the sterno mastoid; its contraction makes the head approach the chest; *i i i*, abdominal muscles, to retain the parts in their places, assist respiration, etc.; *h*, muscles on the chest, to move the arm toward it; *l* extends the arm on a level with the shoulder; *k* is the muscle to raise the fore-arm; *a* moves the fingers; *b*, the fore-leg; and *c* is the tailor's muscle, by which he is enabled to cross his legs.]

The mode in which the nerves act on the mobility of muscles, so as to cause them to thicken or contract, is well shown in this cut. One part of the muscle is attached to the fore-arm, and the other to the head of the arm; as it gradually contracts and shortens on itself, the hand approaches the head



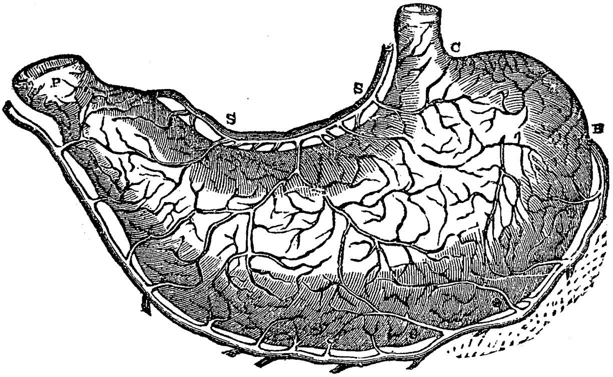
ARM.

[The figure represents the bones of the arm and hand, having all the soft parts dissected off, except one muscle, O B I of which the function is to bend the arm; O, the origin of the muscle; B, the belly; I, the insertion; T T, the tendons; S, the shoulder-joint; E, the elbow. When the belly contracts, the lower extremity of the muscle I is brought nearer to the origin or fixed point, O, and by thus bending the arm at the elbow joint, raises up the weight, W, placed in the hand.]

When the human germ or embryo is first excited to action, it is not as large as a pin's head, yet, even small as it is, the life power is in vigorous exercise; it stations deputations of its properties in the proper places to form their own instruments of action out of the minute pulp. In a short time the heart and blood-vessels are formed to carry nutriment to every part, and the bones, muscles, and other organs appear in succession. Its first care is to perfect all the arrangements that are necessary for purposes of nutrition, which arrangements you will understand better in the adult than in the infant, in whom the parts are out of proportion.

When food is taken in the mouth, the saliva is poured out from manufactories of that substance; it mixes with the food, not only softening it, but also affecting on it an actual change, which is the first real act of digestion. When this fluid is deficient, its want is imperfectly supplied in the other processes of assimilation. This cause alone would account for the dyspepsia, so prevalent among tobacco chewers and smokers, who wantonly exhaust a supply intended for other purposes than the filthy use to which they apply it.

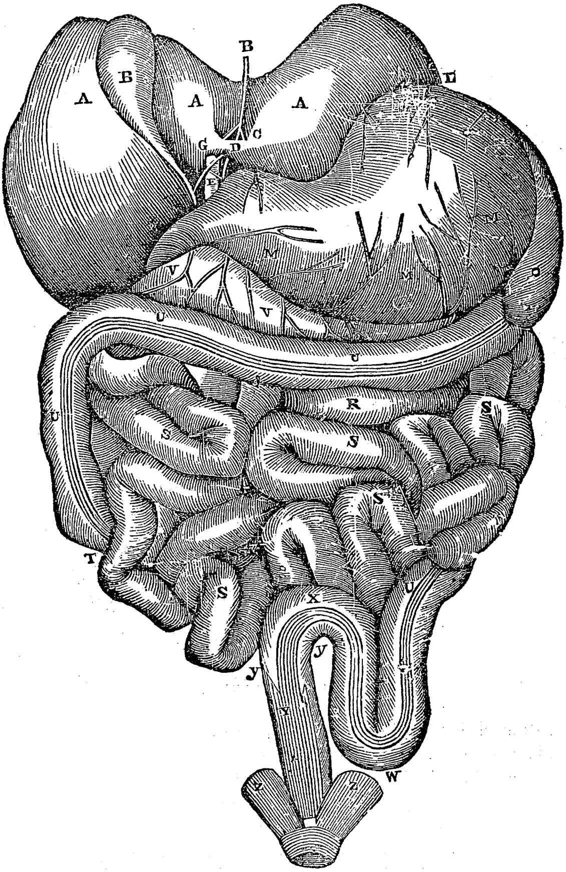
The second act is performed by the stomach, into which the food descends from the mouth by means of a long tube (*œsophagus*) composed of a series of muscular rings



THE STOMACH.

[The stomach is capable of containing, generally, from one to two quarts of liquid; cases occur, however—by want on the one side, and gluttony on the other—in which this proportion is either much diminished or increased. It has two openings—the cardiac, C, (from *cardium*, the heart, it being near that organ) and the pyloric, P, from the Greek for gate-keeper, because it will not let anything but chyme pass it. S S, and B, are arteries surrounding it, to give it a good supply of blood for making the gastric juice.]

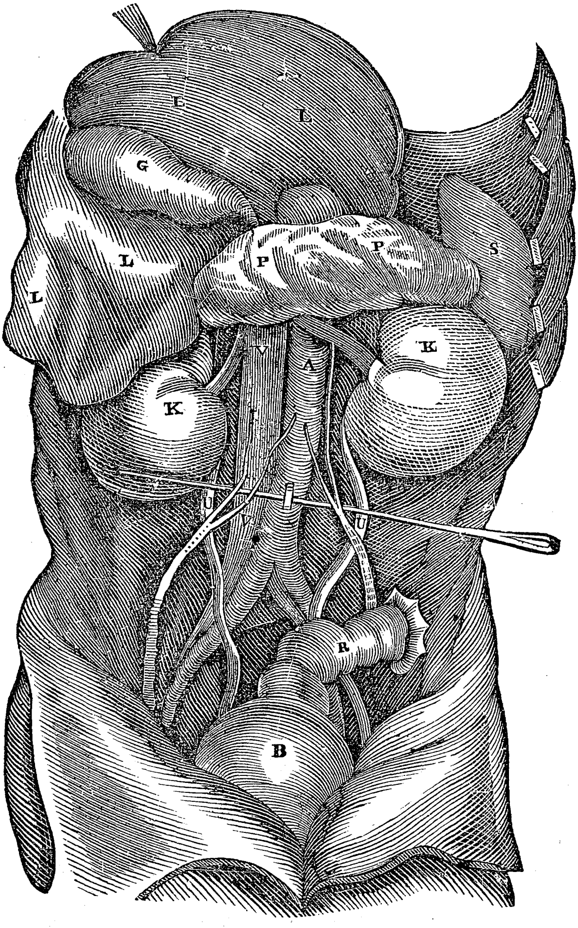
which, by contracting constantly above, push it before them. When there, the gastric fluid is poured out on it, completely dissolving the whole, and changing it into a greyish-looking fluid called *chyme*. The stomach then contracts, closing up the opening by which it entered C,



INTESTINAL TUBE.

he intestinal tube, from the mouth to its final termination, is over thirty feet long. After leaving the stomach, it is divided into large and small intestines. R S S S S T, are the latter, which end at T into the large, which are marked U U U W; and the termination X y is called the rectum, clasping which last are the strong muscle, Z Z, joining in a continuous circular band below. M M M, shows the stomach; A A A, the liver, and its depository of bile, B, the gall-bladder.]

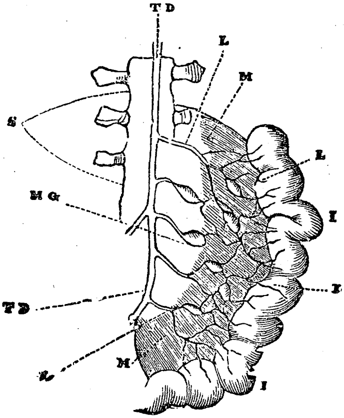
VISCERA.



THE LIVER, GALL-BLADDER, PANCREAS, AND KIDNEYS.

[L is the liver, turned up to show its under surface; G, the gall-bladder; P, the pancreas; K, the kidneys, which secrete urine from the blood, which they empty into the bladder, B, by means of the tubes called ureters U; S is the spleen, an organ at the present day considered merely a reservoir of blood for the stomach. The rectum, R, runs behind the bladder toward its terminating point; V is the great vein carrying up the refuse blood to be purified; A is the artery returning the same blood purified, to meet the wants of the system.]

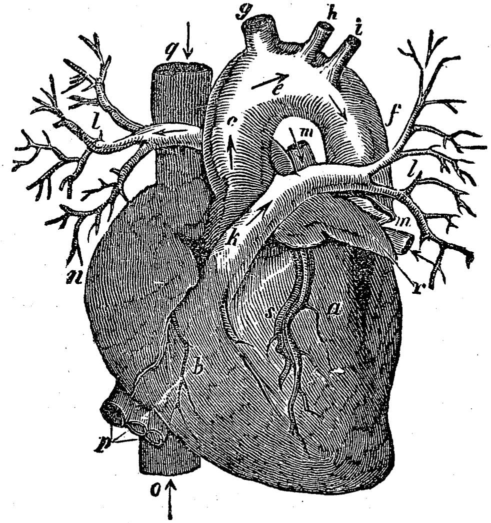
and thus forcing it out through the other orifice P. Soon after entering the intestines, a fluid is poured out through a tube. This fluid is composed of the secretion of the liver (bile), and another secretion from the pancreas (sweet breads); each sending a tube from itself, the tubes uniting into a common duct before opening into the intestines. The liver has a repository for bile, called the gall-bladder, so that it is capable of performing its part in digestion at any moment. It is supposed by many that the juice from the pancreas merely dilutes the bile, but this is not very probable. This juice, when



MESENTERIC GLANDS.

[I I I I, portions of intestine; L, lacteals, which empty into the mesentery glands M G; T D, thoracic duct, which conveys the elaborated fluid (which is, at this point, of a pale pinkish color) into the reservoir in the neck The spine, S, is shown in the back-ground. The mesentery glands exercise a very important part in digestion; they are sometimes diseased in children, a fact which may be known by feeling on their bellies a number of little hard knots; in such cases, the child, if not cured—no matter what the nourishment is—rapidly wastes away and dies. Dr. Edson, the living skeleton lately exhibited at the American museum, died in consequence of disease closing the thoracic duct, and thus preventing any access of nourishment to his system.]

poured on the chyme, separates it into two parts the chyle and excrement. The chyle, at this stage, so much resembles milk, as to take its name from a Greek word meaning that article: it is instantly sucked up by millions of little leech-like vessels, called milk carriers, (lacteals from *lactus*, milk,) which convey it to the mesenteric glands to be further elaborated; leaving them, it is carried to a duct and finally mixed with a reservoir of venous blood in the neck, from whence it enters the upper cavity of the right heart, is thrown into the lower cavity, and then taken to the lungs to receive the last stage of purification.

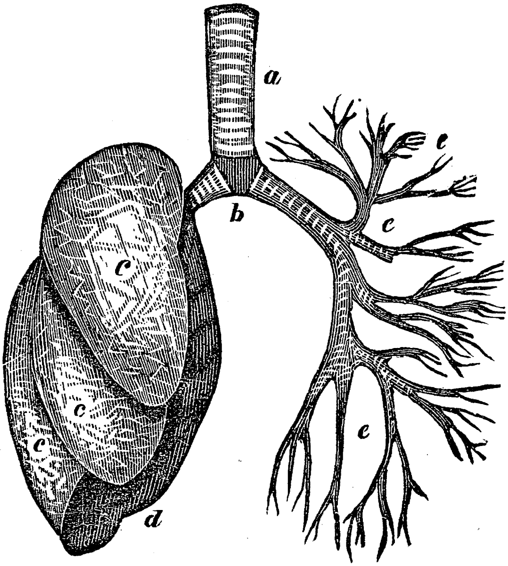


THE HEART.

[Man possesses two hearts, which are only placed together for the sake of convenience. Each heart has two cavities, an upper and a lower one; the upper cavity is called an auricle, from its resembling, in shape, an animal's ear; the lower cavity is called a ventricle, from its shape, resembling a belly. The sudden expansion of the receiving chamber, or auricle of the right heart, *n*, produces a vacuum, which is directly filled by the mixture of elaborated food and veinous blood from various sources, *o*, *p*, *q*; it instantly contracts and empties this blood into the distributing chamber, or ventricle below; the ventricle *b* contracts upon itself, and sends the blood into the pulmonary artery, *k*, to be carried to the lungs, *l l*; after receiving a supply of oxygen, and throwing off its carbonic acid, it returns to the left heart by four pulmonary veins, two of which are shown at *m m*; the left auricle, *r*, expands, produces a vacuum, becomes filled, contracts, and sends the blood into the left ventricle, *a*, which also contracts in turn, and throws the fluid into the aorta, *c e*, from whence it is carried through all parts of the system. If the time that elapses between the contractions of the heart be divided into four parts, three of these parts will represent the period of the heart's activity, and one that of its repose; it thus rests one-quarter of the time, or six hours in every twenty-four; it does this (in common with every part of the body that has been exhausting its strength in working) to recruit. The artery that supplies the heart with blood is called the coronal, *s*. Each cavity of the heart holds two ounces; it commonly contracts seventy times a minute, so that over TWO HOGSHEADS of blood are pumped through our hearts every hour! That the irritation of the blood does not cause the heart to contract, and that it possesses an inherent power of action in itself, are shown by the fact that, when taken out of the body (of course, a very short time after apparent death) and pricked, its first motion is to expand The heart of a sturgeon was hung up to dry, and continued in motion so long that its rustling could be heard in any part of the house.]

Arrived at the lungs, it throws out carbonic acid and takes in a supply of oxygen; it is then thrown into the upper cavity of the left heart, which contracts, sends it into the lower cavity, from whence the aorta receives it, and it then makes its rounds in the system to supply the wants of every part. Chemists tell us that an atom of pure blood is composed of eighteen different elements; and also that the atoms resemble a spangle in shape, being thin and circular with a dot of iron in the middle, occasioning Dr. Good's remark that the wheels of life ran on iron axles.

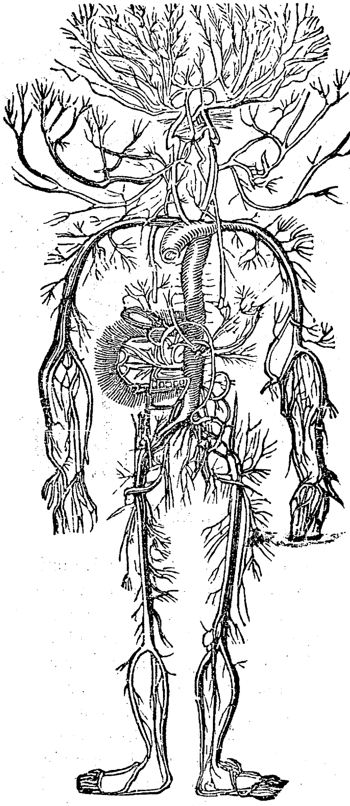
The arteries subdivide to an excessively minute degree, and the extreme branches terminate in little bladders. Each of these little bladders or globular cells has



THE LUNGS.

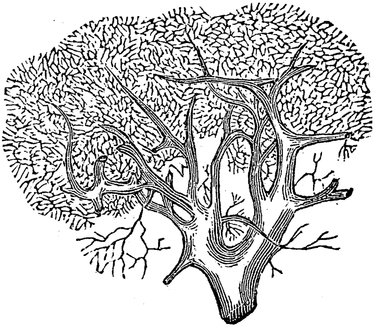
[The windpipe, *a*, gives passage to the air; it ramifies into exceedingly minute branches, *e e e*, which terminate in little cells, the masses of which, in three distinct lobes, are shown at *c c c;* this is only on the right side of the body; on the left side there are but two lobes, the space required for the third being filled by the heart. By means of the muscles surrounding the chest, the lungs are alternately expanded and contracted. It has been found that we require one hundred and forty gallons per hour of pure air for respiration. It is an error that the carbonic acid given out from the lungs poisons the atmosphere in crowded assemblies. Such air has been analyzed, and found to contain as much oxygen as that in a forest; the ill effects are produced from pent-up human exhalations.]

three openings, one for the artery, one for a vein, and one for an absorbent. When an atom of blood arrives in one of them, the absorbent takes from it what is required, and works it up to suit its own purposes; what is left is immediately sucked up by the vein and carried off, to be again mixed with the elaborated food, and passed through the lungs.



ARTERIAL SYSTEM.

You will remember my mentioning, when speaking o the development of the embryo, the fact of deputations of the life power being stationed in different places to form their own instruments of action; these instruments are called glands and their office is to secrete from the blood the different fluids required in the system; they are merely a greater or less number of bundles of little bladders, acting in the mode I have just mentioned, and endowed with specific properties to make certain substances. Thus the liver secretes bile; the lachrymal gland, tears; and the salivary gland, spittle; and the inside coat of the stomach, the gastric juice. Here is a cut showing the mode in which the blood-vessels ramify.

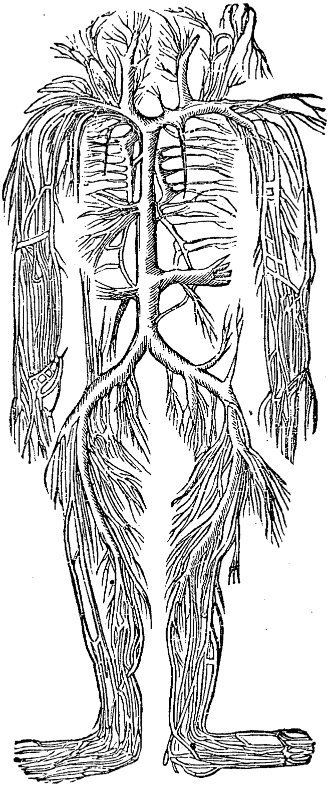


GLAND.

I wish you to carefully examine these cuts and the accompanying descriptions, as too much minuteness in describing the anatomy of the organs, while explaining the functions, would have made the subject very difficult of comprehension.

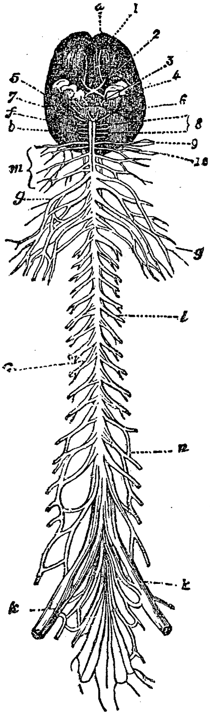
Lady. I think I understand the nutritive functions now, and I am glad to think that nothing but the nervous system remains between us and the sleepers in the Egyptian temples, to whom I am impatient to return; but I should like to know, if anything injurious should enter in the channels of the circulation, how the blood would get rid of it.

Doctor. By means of the skin, kidneys, and lungs which are all excreting glands, or organs, that throw off offending matters. But, to pursue our subject, we



NERVOUS SYSTEM.

must examine the nervous system. This cut of it will give you an idea of the ramifications of the nerves over the surface of the system. The nerves, like every other part of our system when forming, begin at the circumference, and grow toward the centre, as shown here:—



CEREBRO-SPINAL AXIS.

[View of the base of the brain, front portion of the spinal marrow, and several attached nerves: *a*, cerebrum (large brain); *b*, cerebellum (little brain, which is lower and posterior than the other); *c*, spinal marrow; *f* medulla oblongata, the so-called bulging spinal marrow which swells out as it enters the brain; 1, the nerves of smell; 2, nerves of sight; 3, 4, 5, 6, nerves going to different parts of the head, of no particular interest in this place; 7 is related to the nerves of hearing; 8, 9, nerves going to the tongue and gullet, etc.]

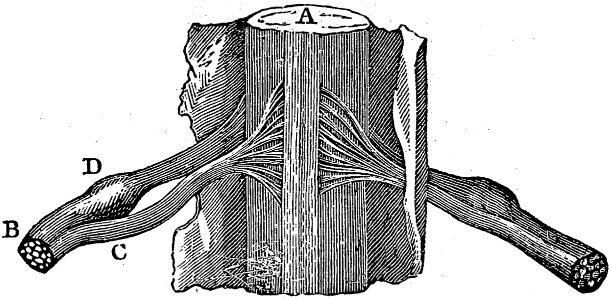
Those of the lower extremities, *k k*, unite in distinct bundles before entering the spine; proceeding upward, we find nerve after nerve running into the back-bone, through holes bored for their reception, as *n*, *c*, *l*, *g*, *z*, show the nerves as they come from the superior extremities, or arms; *m*, those of the neck, etc. The spinal canal is already filled when the nerves enter it by two kinds of nervous matter, the white and the grey; the latter is supposed to be the origin of sensation and motion, as we invariably find, by tracing the nerves to their terminations, that they end in it; and we know the nerves are nothing more than communicating media.

LADY. By your course of reason, I would conclude that cutting the nerve of a part, before it entered the grey matter, would destroy all sensibility in that part.

DOCTOR. And motion as well. All distinct masses of the grey matter in the body are termed ganglia; the spinal cord, from its lowest part till some distance upward in the neck, is composed of two ganglia, sensation and motion. With regard to cutting the nerves, that has been done so often, and so invariably with the same result, that it has become an established point in science, of no sensation of any kind existing, except as connected with a superior essence. Sensation in the lower animal seems even on a par with their intelligence. The gadfly, Dr. Good remarks, when it fastens on the hand, can be cut to pieces without its experiencing any apparent pain; and the idea of Shakespeare has been long ago exploded—that

———" the poor worm thou tread'st on,
In corporeal suffering, feels a pang as great
As when a giant dies.

The nerve of sensation, and that of motion, are bound in the same sheath, till within a short distance of the spinal cord; they then separate, and each enters its own ganglion. This cut shows a front section of the spinal cord and nerves:—

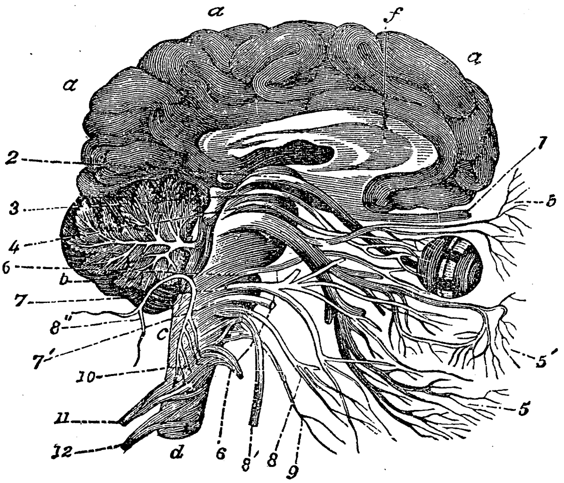


SPINAL CORD AND NERVES.

A represents the spinal cord; B, the united nerves; C, the branch for motion, travelling alone; D, that of sensation, which always thickens into a knot in its progress before entering its ganglion.

At the upper part of the spinal marrow, we find a series of ganglia in pairs, one set behind the other, in regular order, and always found in the same relations to their parts; these are the ganglia of the *special senses.* So much has observation been directed to these points, and so true and unvarying is nature, that, by examining the size of the ganglia of the animal, we can tell the degree of perfection the several senses have attained. In the eagle, we find the optic ganglion large; in the hound, the olfactory; in the rabbit, the auditory; and in all instances, the same result holds.

The nerves supplying the teeth come from the third branch of the five pair marked in the side view 5′.



SIDE VIEW OF THE BRAIN.

[The numerals correspond to those in the cut of the cerebro-spinal axis. The tree-like and branchy appearance of the cerebellum, or lesser brain, is well shown.]

Many of the lower animals have only two ganglia, sensation and motion; as we ascend the scale, and find animals possessed of special senses, so do we find the corresponding ganglia present; still ascending, we find a new pair of ganglia, which I will denominate those of INSTINCTIVE INTELLIGENCE; for, in proportion as the animal exhibits marks of intelligence, do these ganglia increase in size, and the enlargement gives shape to the skull. So small is this in some animals, that they have a perfectly flat skull on a line with the spine. As we still ascend the scale, it continually enlarges, and the skull protrudes above the spinal column, as may be seen in the dog and horse.

In man, the ganglia of instinctive intelligence—or, according to Coleridge, of understanding—is out of all proportion, as regards size, to the others; it covers them all, its bulging in front forming the forehead.

Lady. One might find some excuse, in what you are saying, for the eastern ideas of transmigration; a constant and perfect ascent from the very lowest germ of life to man would give rise to some ideas of its being *one identical spirit*—an immortal being undergoing its education for eternity, and, in the highest and last stage of material maturity, preparing for its future spiritual existence.

Doctor. You will be much surprised to find that the brain of the child before birth is not the miniature brain of the man; but, on the contrary, rises, as you have just guessed, from the lowest to the highest, passing through the grades of animated existence till it arrives at its present state in man, and even then continues growing, if cultivated, as many well-attested cases have fully demonstrated. The head of Napoleon, after he became emperor, was much larger than it was some years previous; a fact shown by two busts of him, now at Paris, taken at different periods.

A Scotch gentleman once informed me that the eldest son among the aristocracy of Great Britain is titled from birth, and, at the death of his father, receives the honors of the deceased without any delay; but that with the heir to the throne it was entirely different—he must be made a knight, a baron, an earl, etc.; gradual and successive steps giving him rank—the laws, unless these preliminaries are observed, declaring him without any. I have never made inquiry to know whether this matter was so or not, but, at any rate, it illustrates the stages of the lords of creation, as they style themselves.

Lady. You have destroyed transmigration, as there could be no occasion of retracing the steps if once gone over.

CONVERSATION IV.

DOUBLE LIFE OF MAN.

Doctor. You will remember the care of the life power, when first excited, to complete all the arrangements required in nutrition. These arrangements are called by anatomists the organs of vegetable or organic life: such are the stomach, liver, heart, arteries, veins, kidneys, etc. Another set is required for the soul: the organs composing it are called the organs of animal life: such are the brain and voluntary muscles.

Lady. To recall your former comparison, every thing that relates to keeping the house in good order, and feeding its inmates, would belong to the vegetable organs, while the animal are devoted to obeying the commands of the soul.

Doctor. You comprehend my meaning. The apparatus in animals that pertains to nutrition, though indirectly influenced by the brain, is a system within itself, having its own set of nerves and ganglia. Its ganglia differ from those of animal life, in being of a reddish grey color, and lying among the soft parts; they are distributed from the orbit of the eye to the lower part of the back bone, and have a grand centre or brain, called the semi-lunar ganglion, which lies behind the stomach.

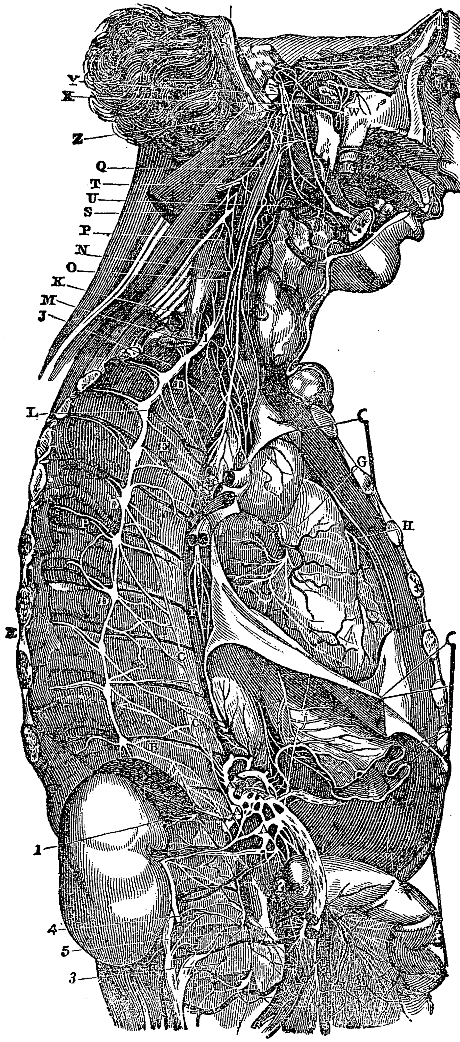
So sparsely are the nerves of sensation given to the organs of vegetable life, that, in surgical operations there is little or no pain felt after the skin is cut. Har vey, the demonstrator of the circulation of the blood was acquainted with a young nobleman who, from disease, had the heart so exposed that it could even be handled while beating: he found, to his astonishment, that unless his fingers came in contact with the outer skin, the young man was altogether unconscious of the heart being touched.

The cut on page 65 shows the ganglionic system of organic life. A A A A is the semi-lunar ganglion, or brain of the system; the letters and numerals name the different ganglia from the organs they superintend. need not mention all these, my object being only to give a general idea of the two lives, vegetable (organic) and animal, that belong to our system.

Lady. Has a distinct separation ever taken place between the two sets of organs, so that one acted while the other was quiescent?

Doctor. Yes; and quite enough to prove that the body and the mind can exist independently of each other. In concussion of the brain, sensation, thought, and locomotion, the functions of animal life, are entirely passive, while the organic continue with the usual activity and regularity. Sleep, which I will refer to again in a short time, affords a less striking instance.

Dr. Good remarks that in cases of suspended animation, by hanging, drowning, or catalepsy the vital principle continues attached to the body after all the vital functions cease to act, often for half an hour, and sometimes for hours. In the year 1769, Mr. John Hunter being then forty-one years of age, of a sound constitution, and subject to no disease except a casual fit of the gout, was suddenly attacked with a pain in the stomach, which was shortly succeeded by a total suspension of



GANGLIONIC SYSTEM OF VEGETABLE LIFE.

the action of the heart and lungs. By the power of the will, or rather by violent striving, he occasionally inflated the lungs, but over the heart he had no control whatever; nor, though he was attended by four of the chief physicians of London from the first, could the action of either be restored by medicine. In about three-quarters of an hour, however, the vital actions began to return of their own accord, and in two hours he was perfectly recovered. Sir Everard Home observed that in the attack there was a suspension of the most material involuntary actions; even involuntary breathing was stopped, while sensation, with its consequences, as thinking and acting, with the will, were perfect, and all the voluntary actions were as strong as ever.

Dendy mentions cases in which this power of disconnection was voluntary. Colonel Townsend's case was one of undoubted authority. That officer was able to suspend the action of both his heart and lungs, after which he became motionless, icy cold, and rigid, a glassy film overspreading his eyes. As there was no breathing, the glass held over his mouth showed no apparent moisture. Though all consciousness would pass away, yet the colonel could re-animate himself when he chose. Dr. Cleghorn relates the case of a man who could stop the pulse at his wrist, and reduce himself to the condition of fainting by his will.

Though it is only in rare cases that the will has any power over the nutritive organism, yet the emotions always exercise a very considerable influence. Every one has experienced the manner in which ill news spoils the appetite. Some cases of the effects of imagination, in producing fear, and thus exciting disease, we have already reviewed, but a few more will not be out of place here. Platerus tells us of some girls playing near a gibbet, when one of them threw stones at a criminal suspended on it. Being violently struck, the body swung, and the girl, believing it was alive, and was descending from the gibbet, fell into violent convulsions and died.

Wescloff was detained as a hostage by the Kalmucs, and was carried along with them in the memorable flight to China. His widowed mother had mourned him as dead, and on his sudden return, the excess of joy was fatal instantaneously. In the year 1544, the Jewish pirate, Sinamus Taffurus, was lying in a port of the Red Sea called Orsenoe, and was preparing for war, being then at variance with the Portuguese. While he was there, he received the unexpected intelligence that his son (who, in the seige of Tunis, had been made prisoner by Barbarossa, and by him doomed to slavery,) was suddenly ransomed and coming to his aid with seven ships well armed. He was immediately struck as if with apoplexy, and expired on the spot. The same effect was produced upon the door-keeper of Congress during the revolution, who, on hearing the news of a victory won by his countrymen, fell back and expired in ecstacy.

Lady. I suppose it is in the ganglion of the understanding that phrenologists map the seats of the various properties of the mind.

Doctor. It is: they say that if there are separate ganglia for the special senses, which are, after all, but mere modifications of general sensibility, why should not the same plan hold good in locating the different properties of the mind, which may be called the special senses of the understanding; and the anatomical analogies favor this view. It had been said, before phrenology was known, that the faculty by which the astronomer calculated eclipses was as distinct in his mind, and preserved its individuality as much, as the eye in his body.

Lady. It would also account for the influence of habit, our constant pursuit of one object fostering the germ of an organ to maturity. What is the brain made of?

Doctor. Its chemical constitution is principally albumen. It is formed of an immense number of arteries, veins, and nerves. Dr. Gall was the first to completely unravel its complex web, which he was enabled to do after hardening its substance by long-continued boiling in oil.

Lady. The ancients must have been aware, as well as ourselves, that the height and prominence of the forehead were the distinguishing traits of a high degree of intelligence, when they made the foreheads of the gods bulge out beyond an angle of ninety degrees.

Doctor. They were as close observers as ourselves, and I am inclined to think knew almost as much. Nearly in the centre of the brain is a substance, commonly about the size of a pea, called the pineal body, which Galen considered to be the seat of the soul: an idea that has been much ridiculed. But an attentive study of the brain has convinced me of the truth of Galen's supposition; for it has communication, by means of nerves, with the most important ganglia. And I think it reasonable to suppose the soul occupying a superior and independent position, overlooking and governing the inferior powers; and precisely such a position would be obtained by a residence in the pineal body; this opinion is confirmed by the fact, that in idiots its means of communication are mostly cut off and injured.

LADY. Can disease of the body injure the soul?

DOCTOR. Only by acting on its means of communication with the external world. We have considered the soul to resemble a man shut up in a dark and central chamber of his house; he has servants stationed at the windows who tell him what they see; an apparatus, also superintended by servants, is fixed on each side of his house, to collect sounds, which are then reported; and the other senses communicate in the same manner. Cut off from all *personal* observation, he can only judge of the outward world from his messengers; when these are true to their office, and the full growth of the brain is attained, man is in complete possession of all his faculties; if he does not become eminent then, he never will. For many years his messengers have been imparting news, and the time has come when they should work up and mentally digest all this material. Knowledge digested becomes wisdom. For this purpose, the avenues gradually close; the servants become old and inactive; and at last—"sans hearing, sight, and taste"—his communications with the external world are at an end; he then moves around—a walking vegetable. Where nature's laws are allowed free operation, we never find abrupt transitions; all rises by a gradually ascending scale; and as man bids adieu to this world, another begins opening to his view, and the soul becomes gradually accustomed to its future mode of existence.

LADY. While on this subject, I would like to know if we have two brains?

Doctor. Yes. Dr. Wigans has lately written a very interesting book on the subject: he argues that as we have duplicates of all the organs of animal life—such as the eyes, ears, etc.—and as each of these produces a distinct and separate impression on the brain, and were so made the better to render us able to judge of, and correct, erroneous impressions, by comparing the effect of each, so the duality of the brain was intended for the same purpose.

Lady. I can easily conceive why the senses should be double, as I have seen persons who were deaf in one ear, and from that cause could not tell the direction from whence the sounds they heard proceeded. The experiment, cited by Abercrombie, of placing a cent on the edge of a table, and standing at the extreme distance from the table to be enabled to knock it off with ease. with both eyes open, by means of the finger when the arm is stretched out—and the certain failure attending the effort when one eye is closed—would prove the necessity of two optical organs.

Doctor. Dr. Wigans argues, in relation to the brain, in a similar manner, and thus accounts very ingeniously for all stages of insanity. He says, that as there are two brains, and each receives from its nerves a distinct impression, both, *provided they are healthy*, will convey a correct and single report to the soul; but if diseased, a very different and conflicting account reaches it, and acting first on one, and then on the other, produces insanity, more or less complete in accordance with the amount of disease. He makes a madman, in this sense, most truly, a "man beside himself"—who holds series of conversations with himself, which, if the separate trains were followed out, we should find consistent in themselves. Let us allow the seat of the soul to be the pineal body, and the theory of Dr. Wigans will be verified.

Lady. Insanity, then, might be considered, in this light, as a squinting of the brains!

Doctor. I am glad to perceive you understand the illustrations. We are now very near to our sick devotees in the Egyptian temples. But I must first make a few remarks on the functions of the brain. The office of this organ is to secrete the *nervous fluid*, by means of which the mind holds communication with, and directs, all the parts to which it is connected by nerves. Though the organs of vegetable life have a ganglionic and nervous system of their own, still many fibres from the brain and spinal marrow are sent to them, and, as in the case of the *emotions*, a powerful though indirect influence is exerted upon them. So long as we have a supply of the nervous fluid, sensation, thought, and locomotion (the functions of animal life), are in vigorous exercise; but the moment the supply becomes deficient or ceases, a partial or total failure of these powers, depending on the quantity, is the direct result, and slumber succeeds, to allow more of the necessary article to be secreted. Whatever acts on the irritability of the brain, so as to change or alter the nervous secretion, acts in a corresponding manner on all the parts to which the changed fluid is carried by the nerves.

The optic and auditory nerves are the principal servants that wait on the mind in conveying news. The eye and ear resemble each other in being instruments for the purpose of condensing vibrations, to make them sufficiently intense to produce impressions on their separate nerves, so that messages can be carried to the inner chamber.

Lady. Is light produced by vibrations, as well as sound? I have always considered it to be composed of particles of matter.

Doctor. It is now proved to be merely the vibrations of an ether existing throughout all space, and capable of being excited by luminous bodies.

Lady. If the optic nerve were uncovered, then we might do without the eye, as the vibrations of light would alone suffice to produce distinct images.

Doctor. We need not have recourse to so violent a mode of reaching the special senses, which even then would require something more to insure success. The *material* in ordinary life has the preponderance; but we are so formed that the *spiritual* in certain cases may obtain the balance of power; in proportion as the latter gains the ascendency do the servants become more active and easily impressible, till at length a point is reached where the apparatus for condensation can be entirely dispensed with. In this state, the vibrations of light that strike on the bony covering of the head will find the nervous matter behind it sensitive enough to convey impressions to the sensorium. This state is commonly termed that of clairvoyance.

Lady. Can we, in any case, ever hear sounds without the ear?

Doctor. Easily; and it does not require any preparation to produce that effect. Hold your watch in such a manner inside the mouth that nothing is touched, and no sound will be heard; but by closing the teeth on it a loud ticking can be instantly perceived. The sound travels through the bony structure to the auditory nerves

Lady. You certainly present proof sufficient; it is as you say. This reminds me of a story I read some years ago about a merchant in Holland, who had not heard a sound for years, till once, while smoking, the end of his pipe accidentally touched a harpsichord, on which his daughter was playing; to his astonishment, he was conscious of the music even to the lowest tones, and he afterwards found that he could converse with any of his family through the medium of a stick supported by the teeth of each.

Doctor. As nature does nothing abruptly, the ascension of the spiritual over the material is gradual. The influence that produces it in fascination is the NERVOUS FLUID or vapor thrown off from the person operating. This vapor acts upon the irritability of the patient; by sympathy it is transmitted to the brain; the secretion of that organ is changed; and the altered nervous fluid it is making when sent to the various parts over which it has influence by the nerves, produces a series of results called fascinating phenomena.

Lady. Does not the loss of this fluid injure the fascinator?

Doctor. In some cases it does, but there are many so gifted as to impart it without danger. A sensation of weakness ensues, which soon vanishes by a new supply of fluid from the continued secretion of the brain. It is the patient that runs the greatest risk, for many persons take the office upon themselves without any ability to discharge its duties properly, and much trouble often ensues in consequence. So well is this understood, that in Prussia it is a criminal offence for any but physicians to operate. Cases have occurred, under my notice, in which the chest has been paralyzed; in others, incessant vomiting produced, and convulsions have been very common. Its true mode of action should be thoroughly understood before it is practised, and then only by the order and in the presence of the physician himself.

Lady. It is divided into stages, is it not?

Doctor. Yes, into six, each of which are again subdivided into six others, making thirty-six in all.

The first stage seems a mere quickening of the senses; it is characterized by a sensation of coolness, and a feeling of more wakefulness than before. In your own case, at this point, you felt, I remember, rather more uneasy than before I commenced; but, in another instance, I was told by the patient that it was impossible to operate on him, so much was his mind filled with the idea of a necessity of going to sleep in being fascinated. I had doubted his susceptibility up to the moment he spoke, but I was then convinced I was affecting him; and, in fact, he was soon insensible. The quickening of the senses is often shown without the agency of fascination, as in fever, when the slightest noise will disturb a man, whom, in health, the explosion of a cannon would not move.

Lady. I have often felt so. Last week I had a severe headache, and could not endure any motion whatever around me, and, if I was touched by accident, was in absolute pain.

Doctor. An extraordinary class of phenomena owes its existence to a peculiar development of this susceptibility I mean what is commonly called idiosyncracies, or peculiarities. I have heard Professor Revere speak of a lady who lived in a state of agony during the flowering season of plants; the pollen floating in the atmosphere acted upon her irritability in such a manner as to produce serious disease, realizing in her own experience Pope's idea of

> "Quick effluvia darting through the brain,
> Die of a rose in aromatic pain;"

and, strange to say, his lines on more refined sensibility and its consequences, have all been verified in this stage. Some men cannot endure the presence, or even proximity, of a cat; others abhor cheese. Stepping into a friend's store one evening, while his clerk was absent, to procure some ipecac, I was requested to weigh it out myself, and replace the bottle on the shelf; should he do it, he said, it would cause him a week's illness. And this seems, too, an instinctive precaution, warning the system against unseen evil, and to disregard which would be dangerous. The friends of a young lady having tried in vain to induce her to eat cheese, enclosed a very small quantity in some cake, which she swallowed without suspicion; an alarming and long continued illness was the result.

The sense of chillness, felt in the first, stage increases, and the pulse begins to rise rapidly; the second stage continues but a short time, and finally ushers in the third, which is denoted by a dreamy and triumphant state of feeling. If any pain exists it now ceases, and the eyes close beyond the power of the will to open. The closure of the eyelids is, beyond doubt, caused by fixing the eyes so steadily on an object as to exhaust their nervous power. Mr. Braid, of Manchester, England, has proved this fact; he considers that it will account for all the phenomena of fascination. His writings, however, demonstrate exhaustion in a most incontestible manner, but they most assuredly do nothing else; it was labor lost, the facts being well known long before, and never doubted. Your personal experience only reaches this stage.

LADY. Is it possible to produce curative effects with out reaching the third stage?

DOCTOR. The second and even first, when thus artificially induced, will often have a beneficial influence. But it is a difficult matter to mark out and separate these stages, closure of the eye not being sufficient evidence, for it may not occur at all. I heard this morning of a man who had three teeth drawn while in one of these stages, and was shown the teeth. The fascinator, after trying several times to close his eyes without success, undertook to draw the teeth. Though at other times exceedingly sensitive, the man from whom they were drawn did not experience the slightest pain.

As the fourth stage is approached, rigidity of the muscles can be induced; the body and limbs may be fixed in the most strange and painful attitudes without causing any pain, and thus continue any length of time. Arrived at the fourth, sensation totally ceases; and a cataleptic state intervenes. Surgical operations can now be performed without pain, or the knowledge of the patient. The nervous system undergoes a remarkable change; either the white matter is not capable of carrying, or the grey of receiving, ordinary impressions.

The fourth is the highest state that man can induce by artificial means; but some persons are so peculiarly constituted as to continue ascending. As they near the fifth, clairvoyance becomes fully manifest. Passing the fifth, the *spiritual* obtains the entire predominance, and the things of the invisible world are displayed with more or less clearness, in proportion as they verge on the sixth which is death.

Lady. Fascination seems to me to be a separation between our animal and vegetable lives. As the ties that bind the animal to earth are loosening, it gains vigor and power; and qualities, the germ of which we have only been enabled faintly to discern below, expand to their full proportion, giving rich promise of future capability.

Doctor. True; and at the sixth, the separation of soul and body is completed, and the corruptible puts on incorruption, and the mortal immortality.

Lady. Then perhaps the final separation of soul and body is accomplished by an angel fascinating us, and death's cold dart be, after all, a pass from a superior being. As I review the wonders I have just heard, it appears to me exceeding strange that so minute a cause as a pass in fascination should produce such astonishing results.

Doctor. It is a very difficult matter to tell what small causes are. A little yeast, mixed with a thousand gallons of malt infusion, will make the whole ferment. A grain of calomel will sometimes alter the irritability of the whole system. Why, then, should not the most highly organized product in our bodies, acting, too, with every advantage on the most sensitive powers of another, produce a strange effect?

But to return to our patients in the goat skins; you will have no trouble now, I presume, in understanding how it was that they had peculiar visions; for, if my supposition of Satan first moving men to the discovery of fascination be true, nothing can be more rational than to suppose he also appeared, or some of his demons, assuming the form of Esculapius, and prescribing the proper remedies for diseases. Though it must have caused him considerable chagrin to relieve pain, and in any way promote human happiness, still it had the advantage of increasing the faith of his devotees, and the number of his followers. That Satan exercised a direct influence on the mind of the emperor Julian is evident, by his deadly hatred of all that pertained to our Saviour, and his mad attempt to refute his prediction in relation to the Jewish temple. Indeed, Julian himself tells us that, when sick, he had often been cured by Esculapius pointing out the proper remedies as he slept in that god's temple.

It would be an easy matter to fill volumes with proofs taken from the early history of the ancient nations; proofs, too, which show, in the most convincing manner that fascination was universally known and practised by the priests of the temples; and that it was principally in this way they were enabled to retain their power and influence over the people. Even Origen tells us that in his day vast multitudes flocked to the temples of Esculapius for relief from infirmities; and distinctly intimates that many remarkable cures were really performed. A few instances from these early times are all we can consider at present.

Charles Radclyffe Hall gives to Apollonius Tyanneus the palm as a mesmerizer. He seems to have been a man of prodigious fascinating power, and was not only famous for curing diseases, and his powers of clairvoyance, but also in foretelling events. While delivering a public lecture at Ephesus, in the midst of a large assembly, he saw the emperor Domitian being murdered at Rome; and it was proved, to the satisfaction of all, that while the murder was performing, he described every circumstance attending it to the crowd, and announced the very instant in which the tyrant was slain. It i recorded, that so great was his nervous influence, that his mere presence, without uttering a single word, was sufficient to quell popular tumults.

Pythagoras, also, ranks high, and not undeservedly. After receiving his education in Egypt, he ever after assumed the dress of a priest of Isis. It is related of him that he could give relief from any pain or disease; his method consisted in passing the hands slowly over the body, beginning with the head, retaining them for some time at a little distance from the place of disease. In common with the philosophers of his day, he veiled the real means of relief under the form of an incantation; for, while fascinating, he kept continually uttering magical words. His power over the lower animals must also have been considerable; he is said to have tamed a furious bear, prevented an ox from eating beans, and stopped an eagle in its flight.

Hippocrates, the father of medicine, was not himself entirely free from the wish to keep this means of cure secret. He informs us that there are two distinct parts in the practice of medicine—the common, such as young herbs, and the secret; which latter must only be divulged to particular persons, who are in favor with superior powers. He mentions, that when the eyes are closed, there are times in which the soul can discern diseases in the body; and also that the light we derive from dreams is a great help in our progress to wisdom

CONVERSATION V.

SPIRITUAL STATES.

Lady. I am glad to see you this morning, Doctor I wanted to ask you if cases ever occurred, in our day of persons seeing the spiritual world I remember your remark of the celestial gates, in Mansoul, being closed, but they were not taken away; why, then, should they not be occasionally opened in the nineteenth century, as well as the first?

Doctor. A little research will convince you that such cases are anything but uncommon: that of William Tennant, a Presbyterian clergyman, of Brunswick, New Jersey, is well known, and of undoubted truth.

He tells us, that while conversing with his brother on the state of his soul, and the fears he entertained for his future welfare, he found himself, in an instant, in another state of existence, under the direction of a superior Being, who ordered him to follow. He was immediately wafted along, he knew not how, till he beheld, at a distance, an ineffable glory, the impression of which he found it impossible to communicate to mortal man. "I immediately reflected on my happy change, and thought, Well, blessed be God! I am safe at last, notwithstanding all my fears. I saw an innumerable host of happy beings, surrounding the inexpressible glory, in acts of adoration and joyous worship; but I did not see any bodily shape or representation in the glorious appearance. I heard things unutterable. I heard their songs and hallelujahs of thanksgiving and praise, with unspeakable rapture. I felt joy unutterable and full of glory. I then applied to my conductor, and requested leave to join the happy throng; on which he tapped me on the shoulder, and said, 'You must return to earth.' This seemed like a sword through my heart. In an instant, I recollect to have seen my brother disputing with the doctor. The three days during which I had appeared lifeless, seemed to be of not more than ten or twenty minutes. The idea of returning to this world of sorrow and trouble gave me such a shock that I fainted repeatedly. Such was the effect on my mind of what I had seen and heard, that if it be possible for a human being to live entirely above the world and the things of it, for some time afterward I was that person. The ravishing sound of the songs and hallelujahs that I heard, and the very words that were uttered, were not out of my ears for at least three years. All the kingdoms of the earth were, in my sight, as nothing and vanity; and so great were my ideas of heavenly glory, that nothing which did not, in some measure, relate to it, could command my serious attention."

So numerous are the cases of this kind of experience, that time would not be profitably occupied in considering them; but it will be well to dwell a moment on another class, of opposite character, which is not less frequent.

I have often seen men who, after a prolonged indulgence in every species of wickedness and blasphemy, have suddenly experienced a change, which gave the *spiritual*, in their system, the predominating influence. At such times they become aware of the presence of the devils, who by acting upon the corruptions of their hearts, have been successfully engaged in tempting them to sin.

More heart-rending pictures than these, of agony and distress, are seldom or never witnessed. They have many times described to me the shapes and gestures of their tormentors, and the unholy thoughts they were endeavoring to instil into their minds. While speaking to me, they would often be seized with a frenzy of fear, and would close the eyelids, and cover them with their hands, in a vain attempt to shut out the horrible spectacle. An urgent desire to commit suicide in some violent manner is generally felt, and many find it impossible to resist the temptation. Multitudes, in this way, are lost every year. I should remark, here, tha delirium tremens can be produced in many ways without the use of alcohol, as by tobacco and opium.

We are thus enabled to trace, in a measure, the deal ings of heaven with our fallen race. The good man worn down by disease and grief, as was Tennant, is not allowed to despair; his heart is cheered, and he is encouraged to persevere by a view of the mansions prepared for him when his toils and troubles are ended below. The bad man is suddenly arrested in his career of wickedness, by withdrawing the veil that covers invisible things, and is thus shown his prompters in vice, and the future companions he must associate with in eternity, whose torments he must share if he continues in the way of destruction. Happily, in some a change is produced. I know one to whom the warning sufficed, and who, at the present time, is serving under the banners of the Prince of Peace.

Lady. And this accounts exactly for the manner in which Elisha's servant, that you mentioned some time since, had his eyes opened. When Elisha prayed "Lord, I pray thee, open his eyes," he must have meant the spiritual ones; for the others could discern the surrounding danger. I suppose the Saviour and his apostles and prophets performed the miracles recorded in Scripture by means of great endowments of fascinating power.

Doctor. On the contrary, there is so broad a line of distinction drawn between the power of performing miracles, and that of fascinating, that it seems impious to confound the two.

The difference between the heathen fascinators and the priests of Jehovah was well shown when they finally failed to compete with Moses in showing wonders, and were forced at the last to exclaim, "This is the finger of God."

Passing Balaam and the prophets of Baal, who competed with Elijah, let us examine the witch of Endor. Artificially inducing clairvoyance, and thus holding intercourse with familiar spirits, was punishable by death in Israel.

Lady. I would ask if you think the woman fascinated Saul?

Doctor. By no means; the whole scene in the 19th chapter of Samuel has its counterpart in many a similar transaction of the present day. A friend of mine once wishing to obtain intelligence of a son who had been dead about three years, went to the house of a clairvoyant. At his request I was present. The husband of the clairvoyant put her to sleep, and, in a little time she announced the fact of her spiritual state, and soon afterwards found the gentleman's son. Messages were given and received by both parent and child, through the medium of the clairvoyant, and my friend departed satisfied: although I still felt incredulous.

When Saul entered the woman of Endor's house, the latter was evidently unaware of his character; and it was only upon a strong pledge she consented to employ her art. The moment she entered the clairvoyant state, however, she was at once aware of the rank of her guest, and exceedingly frightened at the consequences. Our translation reads as if she was scared at Samuel, but this was evidently not the case—witness the cry, "Why hast thou deceived me? for thou art Saul." When, after he had succeeded in tranquilizing her personal fears, she gave the description of her spiritual visitant, Saul perceived that it was Samuel, and bowed himself to the ground. The conversation occurred through the woman, who, on being awakened when it was finished, had so little recollection of all the occurrences as to be totally unaware of his rank, and persuade him to eat in her house and recover his exhausted strength.

The manner in which the magicians were enabled to foretell events is graphically shown in the 22nd chapter of the first book of Kings: "I saw the Lord sitting on his throne, and all the host of heaven standing by him on his right hand and on his left. And the Lord said, Who shall persuade Ahab, that he may go up and fall at Ramoth-Gilead? And one said in this manner, and another said in that manner. And there came forth a spirit and stood before the Lord, and said, I will persuade him. And the Lord said unto him, Wherewith? And he said, I will go forth, and I will be a lying spirit in the mouth of all his prophets. And he said, Thou shalt persuade him, and prevail also: go forth and do so."

Of course, then, when the king, rejecting the advice of Jehovah's minister, sought counsel of his own seers, they gave him the revelations of the false familiar. And it was not the only time evil befell man, when, "as the sons of God came to present themselves before the LORD, Satan came also amongst them."

When Naaman came to Elisha to be healed from his leprosy, it was evidently with the expectation of visiting a more powerful fascinator than any in his own country. Elisha, to render him aware of his error, would not let him enter the house, but as soon as the horses and chariot stopped at his door, sent out a messenger, saying: "Go and wash in Jordan seven times, and thy flesh shall come again to thee, and thou shalt be clean." But Naaman was wroth, and went away and said: "Behold, I thought, *he will surely come out to me*, and stand and call on the name of the Lord his God, and *strike his hand over the place*, (in the context it reads, *move his hand up and down* over the place), and recover the leper."

LADY. I have always been struck with the narrative myself, but your view explains the whole matter to my entire satisfaction, and I do not wonder at the effect it produced on Naaman's mind, to cause him to renounce his idolatry, when he returned cured out of the river, after his servants persuaded him to obey the prophet's injunction.

DOCTOR. These instances will show how totally out of the power of all physiological explanations were the miracles. I have before mentioned the accusation brought against our Saviour of having gained his wonderful powers by stealing magic secrets from the Egyptian temples Had those who preferred the charge been as open to conviction as the idolator Naaman, but little observation would have convinced them of its groundlessness.

Lady. Did the magicians ever pretend to cast out devils?

Doctor. Our Saviour presumes that power in common use amongst them when he says, (Matt. xii., 27,) in answer to their remark of his casting out devils by the power of Beelzebub: "And if I by Beelzebub cast out devils, *by whom do your children cast them out?*" Josephus accounts for this power in speaking of Solomon, whose sagacity and wisdom he pronounces to exceed those of the ancients; "insomuch that he was in no way inferior to the Egyptians, who are said to have been beyond all men in understanding; nay, indeed it was very evident that their sagacity was very much inferior to that of the king's." "God also enabled him to learn that skill which expels demons, which is a useful science to men. He composed such incantations, also, by which distempers are alleviated; and left behind him the manner of using exorcisms, by which they drive away demons, so that they never return; and this method of cure is of great force until this day. For I have seen a certain man of my own country, whose name was Eleazar, releasing the people that were demoniacal in the presence of Vespasian, and his sons, and his captains, and the multitude of his soldiers; and the manner of the cure was this: he put a ring, that had a root of one of those sorts mentioned by Solomon, to the nostrils of the demoniac, after which he drew out the demon through his nostrils; and when the man fell down, he adjured him to return unto him no more, making still mention of Solomon, and reciting the incantations which he composed And when Eleazar would demonstrate to the spectators that he had such a power, he set a little way off a cup or basin full of water, and commanded the demon as he went out of the man to overturn it; and thereby let the spectators know that he had left the man. And, when this was done, the skill and wisdom of Solomon were shown very clearly."

Lady. After all, the practice of divination was forbidden by the Jewish law, and the penalty was death. If it deserved so severe a punishment in those days, how can it be harmless in our own?

Doctor. In former times, the higher powers of fascination were universally abused, and made to subserve idolatry. Those who practised it, sedulously kept the people in perfect ignorance as to its real nature. Even when fascinating, the priests continually chanted magic verses, to which all the curative powers were ascribed. Still it appears to have been lawful to use it for benevolent purposes, as the physicians did not scruple to employ its influence for king David.

Lady. Casting out devils, from an account given in Acts xix, 13, was not always attended with safety: "Then certain of the vagabond Jews, exorcists, took upon themselves to call over them which had evil spirits the name of the Lord Jesus, saying, We adjure you by Jesus, whom Paul preacheth. And there were seven sons of one Sceva, a Jew, and chief of the priests, which did so; and the evil spirit answered and said, Jesus I know, and Paul I know, but who are ye? And the man in whom the evil spirit was, leaped on them and overcame them, and prevailed against them, so that they fled out of that house naked and wounded."

Doctor. It was not only among the ancients that false religions, based on assumptions and supported by the pretended miracles of fascination, existed; there is quite as much of this kind of imposture prevalent in modern times.

Some years ago, in the town of Saco, in Maine, lived Robert Cochran, a man who, by pretending to a more than ordinary share of inspiration—working wonders, curing diseases by the laying on of hands, and other apparent miracles—created a schism in the church to which he belonged, drawing after him a crowd of zealous followers. Upon his death, as his mantle did not descend to another, the society declined in numbers, until, finally, nothing more was heard of the schismatics for a long period. Some time afterward, when the sect had nearly been forgotten, a man—who, it was known, had many years before embraced Cochran's tenets, and had, since then, lived a life of perfect seclusion—entered the town on business. Passing by a lawyer's office, his attention was attracted by a gentleman in it fascinating the lawyer's son. He stood, transfixed with astonishment, before the door, until the process was completed and the boy asleep; when he exclaimed aloud, "My God! that is the way in which Robert Cochran used to give the Holy Ghost."

The Mormons rest their claims of being the true church on the same basis: "Is any sick among you, let him send for the elders of the church, and let them pray over him, anointing him with oil in the name of the Lord, and the prayer of faith shall save the sick man." It is a notorious fact that the exhibition of this proof, as they wish it to be supposed, of apostolic power, has been the means of converting the majority of that deluded sec . Some three years since, I attended a Mormon lady, who had disease of the heart, with marked success. One day, while operating, an elder of the faith, who stood by, remarked that I possessed the gift of laying on of hands. I paid very little attention to his remark at the time; but some weeks afterward, while visiting a friend one evening, I heard a lady explaining the tenets of Mormonism, and triumphantly quoting her own case as an illustration of the fact of their possessing apostolic power, more especially the gift of healing by laying on of hands; she had frequent attacks of *tic doloreux,* and nothing except that rite of the Mormon church had ever sufficed, for one moment, to alleviate the pain.

She was speaking with considerable animation, and had produced a powerful impression on the minds of those present, but was suddenly arrested, in the midst of her interesting and enthusiastic discourse, by an attack of that horrid disease. Finding that she was suffering the most exquisite agony, I rose rather hesitatingly—for I dislike scenes—and offered to relieve her, giving her the assurance that one of the Mormon elders had pronounced me in possession of the gift. The drowning will catch at a straw; and my proposition was assented to, but evidently without any hope of success on the part of the sufferer. In less than a minute—for her system had been prepared by repeated fascinations—she was powerfully under my influence, and the relief was immeasurably greater than it had ever been before. After awaking the lady, I explained the whole matter to those present; and it is very probable that but few of my hearers ever undertook a pilgrimage to the holy city of Nauvoo.

In classifying the fanatical sects, the Swedenborgians follow the Mormons Their name is derived from Emmanuel Swedenborg, a Swedish philosopher who became clairvoyant in the fifty-third year of his age, in 1743. The ascendancy of the *spiritual* over the *material* occurred naturally in him, probably owing to some defect in the constitution; for intense study and a sedentary life paved the way for this change. Swedenborg rejected *faith*—that is, would not believe anything which could not be demonstrated to the understanding—the faculty that judges according to the senses—and of course would not receive any religion, the doctrines of which he could not perfectly comprehend.

He ardently desired a knowledge of the soul, and the method he took to procure this knowledge gives a good illustration of his character. He tried to obtain his wish by confining his experiments to the dead body. To give his own words: "The body being her (the soul's) resemblance, image, and type, for this purpose I am resolved to study her whole anatomy, from top to toe." Had he but studied the laws of life in their living operation, he would have escaped the errors he afterward blundered into.

Lady. Such a mode of operation seems to me about as rational as going into a printer's office when he is out, and trying to form an idea of his countenance from an examination of the type lying around; or inspecting a worn-out and cast-off steam-engine, with an idea to investigate the properties of steam: life in the one case, and vapor in the other, (the only things that can give the required information,) being equally absent.

Doctor. Swedenborg, not finding his own observations very satisfactory, calls to his aid the observations of others, and professes, on this subject, to have obtained the greater part of his knowledge from books, and those written by men who, like himself, from the shape of fibre and spiracle, endeavored to diagnose the functions and mode of operation of each organ. His philosophical works are filled with such nonsense as this, and, as he proceeds, there is a gradual and legitimate degeneration into downright materialism of a modified character; he proclaimed all life to consist in an influx from Deity, and that a plant, a dog, and a man, differ, in reality, only in the shape of their receptacles. You will easily understand how he gained this idea, by considering the brains of different animals, and considering that of man as only a little more powerful and complicated than his inferiors in the animated scale. The study of living nature would have taught him the difference between the faculty, judging by sense, and that in which reason, free-will, and self-consciousness existed. Knowledge, on such a subject, gained from the dead body, is only such

> ———" as putrefaction breeds
> In fly-blown flesh, whereon the maggot feeds,
> Shines in the dark; but, ushered into day,
> The stench remains—the lustre dies away."

Swedenborg was a moralist. His pride dispensed with a crucified Saviour, and consequently a Trinity. "The truth is, that the division of God, or of the Divine essence, into three persons, each of which by himself, or singly, is God, leads to the denial of God." "It is as if there should be Unity and Trinity painted as a man with three heads upon one body, or with three bodies under one head, which is the form of a monster. *If any one should enter heaven with such an idea, he would* *certainly be cast out headlong, although he should say that the head or heads signified essence, and the body or bodies distinct properties.*"

Lady. Do you not think that a person who is really honest in an erroneous opinion will be saved?

Doctor. I do not believe that erroneous opinions of the doctrines of salvation can be honestly entertained. Our Saviour tells us: "He that doeth the will of my Father shall *know* him that sent me." He has promised his Spirit to guide us into all truth. Consequently, if we *really* want instruction, by the perusal of the Scriptures, and prayer, with an active, watchful life, we can obtain all we wish from Him who giveth wisdom to all men liberally, and upbraideth not.

Following the example of many others who preceded him, Swedenborg allegorized the Scriptures, with the exception of the Epistles, which, sturdily resisting all such attempts, he pronounced wanting in an internal sense. He fortifies the dogmas of his system by direct consultation with, and advice from, the celestial powers. Finally, buoyed up beyond measure, he declared that the second coming of Christ was manifested in his person, and that his illumination (clairvoyance) ushered in the last judgment, which took place, not on earth, but in the spiritual world. Among other interesting matters, we are informed, by him, that in the interior of Africa exists a race of spiritual believers (the term he applied to his disciples); that marriages take place in heaven as well as upon earth, our Saviour's words on that subject being figurative; that God resembles a man in shape, his body forming the universe, each atom being a solar system; that a man consists of five spirits, one contained within the other, like a nest of apothecary's pill-boxes; man is not naturally aware of his, only he (Swedenborg) being permitted to see and reveal the mystery; that there is a purgatory of thirty years; that in heaven there are separate places for different nations; that, in heaven, God is seen by the angels, with the right eye as a sun, with the left eye as a moon; that there are lower animals in the spiritual world; sickness exists there, etc., etc.

Several well-attested cases of Swedenborg's clairvoyant powers are recorded. Once, while dining with a friend, at a place many miles distant from his own town, he suddenly rose and walked out in the open air, seemingly in great agitation. At length he entered the house, apparently composed, and informed the company present that there was a great conflagration near his own residence, and that he had been fearful for its safety; but it had just been quenched within one door of his house. The next post brought a full and perfect confirmation of all he had said.

At another time, when the queen of Sweden was jesting with Swedenborg on account of his pretensions to intercourse with the spiritual world, he offered to convince her of the fact by any proof she could propose She told him that the late king, her husband, at the moment of death, when she was alone with him, had whispered something important to her, and if he (Swedenborg) could tell her what it was, she would be satisfied that he had spiritual communication. The next afternoon, Swedenborg called on her, mentioned that he had seen her husband, and had been informed by him what were his last words, which he then told the queen. Her majesty immediately swooned away, and, on recovering, expressed her astonishment: declaring that she had no longer any doubt relative to the philosopher's power.

Swedenborg taught that the spirit gives shape to the body, and if any member (as a leg) is lost, still the perfect spiritual shape is preserved. Some persons confirm this view by instancing cases where pain remains in the toes after the limb to which those toes belonged has been cut off.

Lady. Do such cases ever occur?

Doctor. Very frequently. The next day, and sometimes for months after amputation, considerable pain is felt in the excised member. After the nerves have habituated themselves to their new relations, it ceases. Physiologists account for this singular matter in various ways; but many consider the spiritual solution the best. He also taught that after death, as the body remained in exactly the same shape, it was very difficult, from the preconceived notions of that state, for the deceased to really believe they were in another world. He seems to entertain much dislike to Calvin, whose entrance to the spiritual world he thus describes: "I have heard (from the angels) that when he first came into the spiritual world, he believed no otherwise than that he was still in the world where he was born; and, although he heard from the angels who were associated with him at his first entrance, that he was now in their world, and not in his former world, he said, 'I have the same body, the same hands, and the like senses.' But the angels instructed him that he was now in a substantial body, and that before he was not only in the same, but in a material body, which invested the substantial; and that the material body had been cast off and the substantial remained, which is man. This, at first, he understood but the next day, etc." As we have spent sufficient time on Swedenborg, I must conclude by mentioning that his religion was evidently formed before his illumination, and that, clairvoyant only in a low degree. his philosophy every where chimes in with his revelations.

LADY. Have others ever given to the world any similar experience?

DOCTOR. Many have done so; of whom the seeress of Prevorst is an instance. In 183–, in the upper part of our city, a boy resided in whom this anomaly existed. A Methodist minister lived in the same house, and being much interested in the boy, would often take him as a companion while visiting his charge. The boy would often cross the street to avoid the proximity of some one passing; and, upon being asked the reasons for his conduct, would reply, "that the person was wicked, and had given evil spirits power over him, and he could see them flocking round, filling his mind with evil suggestions." Some time after this, two young ladies passed a night in attendance upon a poor woman who was dying; her children, a boy and two girls, were in the room. Just before her death, she called the boy to her, and, after a little conversation, they heard her remark, "Is that all?" While his mother was dying, the boy fell upon the floor in a convulsive fit, in which he continued, despite of all assistance, some ten minutes; but at last rose, exclaiming, "Mother is happy, and I am satisfied!" and was perfectly calm afterwards. The ladies seized a chance, afforded by the temporary absence of the boy, to ask the girls what all this meant; they replied, that their brother could see spirits, and their mother, wishing to find out what some dark forms around her bed were saying, he told her they merely came to carry her off, when she replied, "Is that all?" On inquiry, they found it was the same boy with whom the Methodist minister was acquainted.

It is probable that the prophets in Israel, in ancient times, had the powers of the inner man developed. This change in the system seems to have been the test Elijah gave Elisha, whether his request would be granted. "And it came to pass, when the Lord would take up Elijah into heaven by a whirlwind, that Elijah went with Elisha from Gilgal," etc. "And it came to pass, when they were gone over, that Elijah said unto Elisha, Ask what I shall do for thee before I am taken from thee. And Elisha said, I pray thee, let a double portion of thy spirit be upon me. And he said, Thou hast asked a hard thing; nevertheless, if *thou see me when I am taken from thee*, it shall be so unto thee," etc. "And it came to pass, as they still went on and talked, that behold there came a chariot of fire, and horses of fire, and parted them both asunder; and Elijah went up by a whirlwind into heaven, and Elisha *saw it*," etc.

CONVERSATION VI.

STAGES IN DYING.

Doctor. As we have considered the various stages of fascination, from a mere quickening of the senses to death, it will be well to consider this last a little more in detail; as, in doing so, we shall in a measure review the others.

Lady. Does the dying person pass through the six stages in regular succession?

Doctor. I believe that is generally the case.

Lady. But how then do you account for the extreme pain that is often felt in dying? The stages of fascination soothe pain—they do not cause it.

Doctor. That is very true; and when these stages really commence there is no longer any pain; but up to the first stage the fatal disease exerts unlimited sway. After the fourth commences, bodily insensibility is an inevitable consequence; the violent convulsions of the muscles do not cause suffering in the mind. Dr. Adam Clarke, when relating his recovering from drowning, stated to Dr. Lettsom that, during the period of his apparent unconsciousness, he felt a new kind of life. He says, "Now I aver, 1st. That, in being drowned, I felt no pain. 2d. That I did not, for a single moment, lose my consciousness. 3d. I felt indescribably happy; and though dead, as to the total suspension of all the functions of life, yet I felt no pain in dying; and I take it for granted, from this circumstance, those who die by drowning feel no pain, and that probably it is the easiest of all deaths. 4th. That I felt no pain till once more exposed to the action of the atmospheric air ; and *then* I felt great anguish and pain in returning to life, which anguish, had I continued under water, I never should have experienced," etc.

Dr. Moore cites Mr. Green, who, in his diary, mentions a person who had been hung and cut down on a reprieve, who, being asked what were his sensations, stated that the preparations were dreadful beyond expression, but that, on being dropped, he instantly found himself amidst fields and rivers of blood, which gradually acquired a greenish tinge. Imagining that if he could reach a certain spot he should be easy, he seemed to himself to struggle forcibly to attain it, and then he felt no more. Schiller, when dying, was asked how he felt. "Calmer and calmer," he replied. Dr. Moore says that when the vital flame flickered, almost extinguished, the heart faltering with every pulse, and every breath a convulsion, he said to a dying believer, who had not long before been talking of undying love, "Are you in pain?" and the reply, with apparently the last breath, was, "It is delightful!" In another person, in whom a gradual disease had so nearly exhausted the physical powers that the darkness of death had already produced blindness, the sense of God's love was so overpowering, that every expression, for many hours, referred to it in rapturous words, such as, "This is life—this is heaven—God is life—*I need not faith—I have the promise!*"

Lady. I would ask if there is any certain sign by which we may recognize death so as to prevent burying alive?

Doctor. Only one, and that is putrefaction. Dendy cites several cases of premature interment, some of which I will mention:

On the exhumation of the Cimetiere des Innocents at Paris, during the Napoleon dynasty, the skeletons were many of them discovered in attitudes struggling to get free; indeed some, we are assured, were partly out of their coffins. So noted was this matter in Germany, as to give rise to a custom of placing a bell-rope in the hand of a corpse for twenty-four hours before burial.

Miss C. and her brother were the subjects of typhoid fever. She seemed to die, and her bier was placed in the family vault. In a week her brother died also, and when he was taken to the tomb, the lady was found *sitting in her grave-clothes* on the steps of the vault, having, after her waking from the trance, died of terror or exhaustion.

A girl, after repeated faintings, was apparently dead, and taken as a subject into a dissecting room in Paris. During the night, faint groans were heard in the room; but no search was made. In the morning it was apparent that the girl had *attempted to disengage herself from the winding-sheet*, one leg being thrust off from the tressels, and an arm resting on an adjoining table.

The emperor Zeno was prematurely buried; and when the body was soon after casually discovered, it was found that he had, to satisfy acute hunger, *eaten some flesh from off his arm.*

Lady. Have there not been cases in which recovery has taken place?

Doctor. None that bear any proportion to the premature interments. A romantic story is told of a young French lady at Paris, who was condemned by her father to a hated marriage, while her heart was devoted to another. She fell into a trance and was buried. Under some strange influence her lover opened her grave, and she was revived and married. Dendy tells a story of another strange lady, who was actually the subject of an anatomist. On the existence of some faint signs of vitality, he not only restored the lady to life, but united himself to her in marriage.

Bourgeois tells that a medical man, in 1838, from the sudden influence of grief upon the organic system, sunk into a cataleptic state, but his consciousness never left him. The lamentations of his wife, the condolence of friends, and the arrangements regarding his funeral, were all distinctly heard. Perfectly aware of all that was going on around him, he was placed in the coffin, and carried in solemn procession to the grave. As the solemn words, "Earth to earth," were uttered, and the first clod fell upon his coffin lid, so sudden an influence was produced upon his organic system by terror, as to neutralize the effect of grief—he shrieked aloud, and was saved.

A story is related of a lady who fell into a cataleptic state after a violent nervous disorder. It seemed to her, as if in a dream, that she was really dead; yet she was perfectly conscious of all that happened around her in his dreadful state. She distinctly heard her friends speaking and lamenting her death at the side of her coffin: she felt them pull on her dead clothes, and lay her in it. This feeling produced a mental anxiety which was indescribable. She tried to cry, but her soul was without power, and could not act on her body. She had the contradictory feeling as if she were in her own body, and yet not in it at the same time. It was as equally impossible for her to stretch out her arm or to open her eyes as to cry, although she continually endeavored to do so. The internal anguish of her mind was, however, at its utmost height when the funeral hymns were sang, and when the lid of the coffin was about to be nailed on. The thought that she was to be buried alive was the first one which gave activity to her soul, and caused it to operate on her corporeal frame.

Abbe Menon tells of a cataleptic girl, who was doomed to dissection; when laid on the table, the first cut of the knife awoke her and she lived. Less fortunate, says Dendy, was Cardinal Somaglia, who, falling into *syncope* from intense grief, it was decided that he should be opened and embalmed. As the surgeon's knife punctured the lungs, the heart throbbed, and the cardinal attempted to avert the knife with his hand; but the DIE was cast, and he *died.*

A gentleman was apparently seized with apoplexy while at cards. A vein was opened in both arms, but *no blood flowed.* He was placed in a room with two watchers, who slept, alas! too long; for, in the morning, the room was deluged with blood from the punctures, and his life was gone.

LADY. Did the persons who recovered relate any spiritual views?

DOCTOR. In some cases; but the most of them experienced nothing more than a separation between organic and animal life, so complete, indeed, as to deprive them of the use of the voluntary muscles for a time. A review of these facts will justify the conclusion that interment is wrong until putrefaction commences.

Wonderful stories have been related in all ages about the wonders of trance, or the fifth degree. Moore gives the substance of one from Plutarch: Thespesios of Sol fell violently on his neck, and was supposed to be dead. Three days after, however, when about to be interred, he recovered. From this time, a wonderful change was apparent in his conduct; for he had been licentious and prodigal, but ever after was devout, noble, and conscientious. On his friends requiring the reason of this strange conversion, he stated that during his apparent death, his rational soul had experienced marvellous vicissitudes; his whole being seemed at first on a sudden to breathe, and to look about it on every side, as if the soul had been all eye, while, at the same time, he felt as if gliding gently along, borne upon a stream of light. Then he seemed to meet a spiritual person of unutterable loveliness, who conducted him to various parts of the unseen world, and explained to him the mysteries of divine government, and showed him the manner in which wickedness meets its reward. This vision exerted all the influence of truth upon his mind, and entirely altered his character and conduct.

The Methodist denomination afford many strange instances of singular experience, so well known that it would be useless to repeat them. We will conclude the degrees by a chapter from Dr. Nelson, who, in his CAUSE AND CURE OF INFIDELITY, (a work published by the American Tract Society, and which ought to lay on the shelf of every family in the land, with the Bible and Bunyan's Pilgrim's Progress; a work, too, which no child of mine, able to tell the letters, should ever fail o peruse and commit to memory,) mentions several cases of the opening of the spiritual eye. The unbeliever, at the point of death, *sees* the reality of those things at which he formerly scoffed; he commences the passage of the river (a transition of the stages) with stoical indifference, but before reaching the other side, evinces the most terrible despair, and the parting spirit bids adieu in a wail of agony. The follower of the Man of Calvary approaches the brink with fear, but ere long, the choral music of the seraphim proves a cordial to his fainting spirit, he pants to enter the blessed abodes he *sees* opening before him, and the rapturous exclamation, "Lord, receive my spirit!" announces that he sleeps in Jesus. You are sufficiently prepared to appreciate the physiological state he describes without further explanation.

OBSERVATIONS ON MAN'S DEPARTURE.

"While attending medical lectures at Philadelphia, I heard, from the lady with whom I boarded, an account of certain individuals who were dead to all appearance, during the prevalence of the yellow fever in that city, and yet recovered. The fact that they saw, or fancied they saw, things in the world of spirits, awakened my curiosity.

"She told me of one, with whom she was acquainted, who was so confident of his discoveries that he had seemingly thought of little else afterward, and it had then been twenty-four years. These things appeared philosophically strange to me, for the following reasons:—

"First: Those who, from bleeding or from any other cause, reach a state of *syncope*, or the ordinary fainting condition, think not at all, or are unable to remember any mental action. When they recover, it appears either that the mind was suspended, or they were unable to recollect its operations. There are those who believe on either side of this question. Some contend for suspension; others deny it, but say we never can recall thoughts formed while the mind is in that state, for reasons not yet understood.

"Secondly: Those who, in approaching death, reach the first state of insensibility, and recover from it, are unconscious of any mental activity, and have no thoughts which they can recall.

"Thirdly: If this is so, why, then, should those who had travelled further into the land of death, and had sunk deeper into the condition of bodily inaction, when recovered, be conscious of mental action, and remember thoughts more vivid than ever had flashed across their souls in the health of boyhood, under a vernal sun, and on a plain of flowers?

"After this, I felt somewhat inclined to watch, when it became my business year after year, to stand by the bed of death. That which I saw was not calculated to protract and deepen the slumbers of infidelity, but rather to dispose toward a degree of restlessness; or, at least, to further observation. I knew that the circle of stupor, or insensibility, drawn around life, and through which all either pass, or seem to pass, who go out of life, was urged by some to prove that the mind could not exist unless it be in connection with organized matter. For the same reason, others have contended that our souls must sleep until the morning of the resurrection, when we shall regain our bodies. That which I witnessed for myself, pushed me (willing or unwilling) in a different direction. Before I relate these facts, I must offer something which may illustrate, to a certain extent, the thoughts toward which they pointed.

"If we were to stand on the edge of a very deep ditch or gulf, on the distant verge of which a curtain hangs which obstructs the view, we might feel a wish to know what is beyond it, or whether there is any light in that unseen land. Suppose we were to let down a ladder, protracted greatly in its length, and ask a bold adventurer to descend and make discoveries. He goes to the bottom, and then returns, telling us that there he could see nothing—that all was total darkness. We might very naturally infer the absence of light there; but if we concluded that his powers of vision had been annihilated, or that there could surely be no light in the land beyond the curtain, because, to reach that land, a very dark ravine must be crossed, it would have been weak reasoning; so much so, that, if it contented us, we must be easily satisfied. It gave me pain to notice many—nay, many physicians—who on these very premises, or on something equally weak, were quieting themselves in the deduction that the soul sees no more after death. Suppose this adventurer descends again, and then *ascends* the other side, so near the top that he can reach the curtain and slightly lift it. When he returns, he tells us that his vision had been suspended *totally* as before, but that he went nearer the distant land, and it was revived again; that, as the curtain was lifted, he saw brighter light than he had ever seen before. We would say to him: 'A certain distance does suspend; but inaction is not loss of sight: only travel on further, and you will see again.' We can understand that any one might go to the bottom of that ravine a thousand times; he might remain there for days, and, if he went no further, he could tell, on his return, nothing of the unseen regions.

"Something like this was illustrated by the facts noted during many years' employment in the medical profession. A few cases must be taken as examples from the list.

"I was called to see a female, who departed under an influence which causes the patient to faint again and again, more and still more profoundly, until life is extinct. For the information of physicians, I mention, it was uterine hemorrhage from inseparably-attached placenta. When recovered from the first condition of syncope, she appeared as unconscious, or as destitute of activity of spirit, as others usually do. She sank again and revived: it was still the same. She fainted more profoundly still; and when awake again, she appeared as others usually do who have no thoughts which they can recall. At length she appeared entirely gone. It did seem as though the struggle was forever past. Her weeping relatives clasped their hands and exclaimed: 'She is dead!' but, unexpectedly, she waked once more, and, glancing her eyes on one who sat near, exclaimed: 'Oh, Sarah, I was at an entirely new place!' and then sunk to remain insensible to the things of the *place* we live in.

"Why she, like others in fainting, should have no thoughts which she could recall, when not so near death as she afterward was when she had thought, I could not clearly explain. Why her greatest activity of mind appeared to happen during her nearest approach to the future world, and while so near that, from that stage, scarcely any ever return who once reach it, seemed somewhat perplexing to me. I remembered, that in the case recorded by Dr. Rush, where the man recovered who was, to all appearance, entirely dead, his activity of mind was unusual. He thought he heard and saw things unutterable. He did not know whether he was altogether dead or not. St. Paul says he was in a condition so near to death, that he could not tell whether he was out of the body or not, but that he heard things unutterable. I remembered that Tennant, of New Jersey, and his friends, could not decide whether or not he had been out of the body; but he appeared to be so some days, and thought his discoveries *unutterable.* The man who cuts his finger and faints, recovering speedily, has no thoughts, or remembers none: he does not approach the distant edge of the ravine. These facts appeared to me poorly calculated to advance the philosophical importance of one who has discovered from sleep, or from syncope, that there is no other existence, because this is all which we have seen. They appeared to me rather poorly calculated to promote the tranquility of one seeking the comforts of atheism. For my own part, I never did desire the consolations of everlasting nothingness; I never could covet a plunge beneath the black wave of eternal forgetfulness, and cannot say that these observations, in and of themselves, gave me pain; but it was evident that thousands of the scientific were influenced by the weight of a small pebble to adopt a creed—provided that creed contradicted Holy Writ. I had read and heard too much of man's depravity, and of his love for darkness, not to see that it militated against my system of deism, if it should appear that the otherwise learned should neglect to observe, or if observant, should be satisfied with the most superficial view, and, seizing some shallow and questionable facts, build hastily upon them a fabric for eternity.

"In the cases of those who, recovering from yellow fever, thought they had enjoyed intercourse with the world of spirits, they were individuals who had appeared to be *dead.*

"The following fact took place in recent days. Similar occurrences impressed me during years of observation. In the city of St. Louis, a female departed, who had a rich portion of the comforts of Christianity

It was after some kind of spasm, that was strong enough to have been the death-struggle, that she said—in a whisper, being unable to speak aloud—to her young pastor: 'I had a sight of home, and I saw my Saviour!'

"There were others, who, after wading as far as that which seemed to be the middle of the river, and, returning, thought they had seen a different world, and that they had an antepast of hell. But these cases we pass over, and look at facts which point along the same road we have been travelling.

"I was surprised to find that the condition of mind in the case of those who were dying, and of those who only *thought* themselves dying, differed very widely. I had supposed that the joy or the grief of death originated from the fancy of the patient, (one supposing himself very near to great happiness, and the other expecting speedy suffering,) and resulted in pleasure or apprehension. My discoveries seemed to overturn this theory. Why should not the professor of religion who believes himself dying, when he really is not, rejoice as readily as when he *is* departing if his joy is the offspring of expectation? Why should not the alarm of the scoffer, who believes himself dying and is not, be as uniform and as decisive as when he is in the river, if it comes of fancied evil or cowardly terrors? The same questions I asked myself again and again. I have no doubt that there is some strange reason connected with our natural disrelish for truth, which causes so many physicians, after seeing such facts so often, never to observe them. During twenty years of observation, I found the state of the soul belonging to the dying was, uniformly and materially, unlike that of those who only supposed themselves departing. This is best made plain by noting cases which occurred.

"1. There was a man who believed himself converted, and his friends, judging from his walk, hoped with him. He was seized with disease, and believed himself within a few paces of the gate of futurity. He felt no joy; his mind was dark, and his soul clouded. His exercises were painful, and the opposite of every enjoyment. He was not dying. He recovered. He had not been in the death-stream. After this he was taken again. He believed himself dying, and he was not mistaken. All was peace, serenity, hope, triumph.

"2. There was a man who mocked at holy things. He became seriously diseased, and supposed himself sinking into the death-slumber. He was not frightened. His fortitude and composure were his pride, and the boast of his friends. The undaunted firmness with which he could enter futurity was spoken of exultingly. It was a mistake. He was not in the condition of dissolution. His soul never had been on the line between two worlds. After this he was taken ill again. He supposed, as before, that he was entering the next state, and he really was; but his soul seemed to feel a different atmosphere. The horrors of these scenes have been often described, and are often seen. I need not endeavor to picture such a departure here. The only difficulty in which I was thrown by such cases was, 'Why was he not thus agonized when he thought himself departing? Can it be possible that we can stand so precisely on the dividing line, that the gale from both this and the coming world may blow upon our cheek? Can we have a taste of the exercises of the next territory before we enter it?' When I attempted to account for this on the simple ground of bravery and cowardice, I was met by the two following facts:—

"First, I have known those (the cases are not unfrequent) who were brave, who had stood unflinching in battle's whirlpool. They had resolved never to disgrace their system of unbelief by a *trembling* death. They had called to Christians in the tone of resolve, saying: 'I can die as coolly as you can.' I had seen those die from whom entire firmness might fairly be expected. I had heard groans, even if the teeth were clenched for fear of complaint, such as I never wish to hear again; and I had looked into countenances, such as I hope never to see again.

"Again, I had seen cowards die. I had seen those depart who were naturally timid, who expected themselves to meet death with fright and alarm. I had heard such, as it were, sing before Jordan was half forded. I had seen faces where, pallid as they were, I beheld more celestial triumph than I had ever witnessed anywhere else. In that voice there was a sweetness, and in that eye there was a glory, which I never could have fancied in the death-spasms, if I had not been near.

"The condition of the soul, when the death-stream is entered, is not the same with that which it becomes (oftentimes) when it is almost passed. The brave man who steps upon the ladder across the dark ravine, with eye undaunted and haughty spirit, changes fearfully, in many cases, when he comes near enough to the curtain to lift it. The Christian who goes down the ladder, pale and disconsolate, oftentimes starts with exultation, and tries to burst into a song when almost across.

"CASE OF ILLUSTRATION.—A revolutionary officer, wounded at the battle of Germantown, was praised for his patriotism. The war ended; but he continued still to fight, in a different way, under the banner of one whom he called the Captain of his salvation. The applause of men never made him too proud to talk of the Man of Calvary. The hurry of life's driving pursuits could not consume all his time, or make him forget to kneel by the side of his consort, in the circle of his children, and anticipate a happy meeting in a more quiet clime.

"To abbreviate this history, his life was such that those who knew him believed, if any one ever did die happily, this man would be one of that class. I saw him when the time arrived. He said to those around him: 'I am not as happy as I could wish, or as I had expected. I cannot say that I distrust my Saviour, for I know in whom I have believed; but I have not that pleasing readiness to depart which I had looked for.' This distressed his relatives beyond expression. His friends were greatly pained, for they had looked for triumph. His departure was very slow, and still his language was: 'I have no exhilaration and delightful readiness in my travel.' The weeping circle pressed around him. Another hour passed. His hands and his feet became entirely cold. The feeling of heart remained the same. Another hour passes, and his vision has grown dim, but the state of his soul is unchanged. His daughter seemed as though her body could not sustain her anguish of spirit, if her father should cross the valley before the cloud passed from his sun. She (before his hearing vanished) made an agreement with him, that, at any stage as he travelled on, if he had a discovery of advancing glory, or a foretaste of heavenly delight, he should give her a certain token with his hand. His hands he could still move, cold as they were. She sat holding his hand, hour after hour. In addition to his sight, his hearing at length failed. After a time he appeared almost unconscious of anything, and the obstructed breathing peculiar to death was advanced near its termination, when he gave the token to his pale but now joyous daughter, and the expressive flash of exultation was seen to spread itself through the stiffening muscles of his face. When his child asked him to give a signal *if he had any happy view of heavenly light*, with the feelings and opinions I once owned, I could have asked: 'Do you suppose that the increase of the death-chill will add to his happiness? Are you to expect, that as his eyesight leaves, and as his hearing becomes confused, and his breathing convulsed, and as he sinks into that cold, fainting, sickening condition of pallid death, that his exultation is to commence?'

"It did then commence. Then is the time when many, who enter the dark valley cheerless, begin to see something that transports; but some are too low to tell of it, and their friends think they departed under a cloud, when they really did not. It is at this stage of the journey that the enemy of God, who started with look of defiance and words of pride, seems to meet with that which alters his views and expectations; but he cannot tell it, for his tongue can no longer move.

"Those who inquire after and read the death of the wife of the celebrated John Newton, will find a very plain and very interesting instance. where the Saviour seemed to meet with a smiling countenance his dying servant, when she had advanced too far to call back to her sorrowful friends, and tell them of the pleasing news.

"My attention was awakened very much by observing the *dying fancies* of the servants of this world, differing with such characteristic singularity from the fancies of the departing Christian. It is no uncommon thing for those who die, to believe they see, or hear, or feel, that which appears only fancy to by-standers. Their friends believe that it is the overturning of their intellect. I am not about to enter into the discussion of the question, whether it is, or is not, always fancy. Some attribute it to more than fancy; but inasmuch as, in many instances, the mind is deranged while its habitation is falling into ruins around it, and inasmuch as it is the common belief that it is only imagination of which I am writing, we will look at it under the name of fancy.

"The fanciful views of the dying servants of sin, and the devoted friends of Christ, were *strangely* different, as far as my observation extended. One who had been an entire sensualist and a mocker at religion, while dying, appeared in his senses in all but one thing. 'Take that black man from the room,' said he. He was answered that there was none in the room. He replied: 'There he is, standing near the window. His presence is very irksome to me—take him out.' After a time, again and again, his call was: 'Will no one remove him? There he is—surely some one will take him away!'

"I was mentioning to another physician my surprise that he should have been so much distressed if there had been many blacks in the room, for he had been waited on by them, day and night, for many years; also that the mind had not been diseased in some other respect: when he told me the names of two others (his patients)—men of similar lives—who were tormented with the same fancy, and in the same way, while dying.

"A young female, who called the Man of Calvary her greatest friend, was, when dying, in her senses, in all but one particular. 'Mother,' she would say, pointing in a certain direction, 'do you see those beautiful creatures?' Her mother would answer: 'No, there is no one there, my dear.' She would reply: 'Well, that is strange. I never saw such countenances and such attire. My eye never rested on anything so lovely.' Oh, says one, this is all *imagination*, and the *notions* of a *mind collapsing;* wherefore tell of it? My answer is, that I am not about to dispute or to deny that it is fancy; but the fancies differ in features and in texture. Some in their derangement call out: 'Catch me, I am sinking—hold me, I am falling.' Others say: 'Do you hear that music? O, were ever notes so celestial!' This kind of notes, and these classes of *fancies*, belonged to different classes of individuals; and *who they were*, was the item which attracted my wonder. Such things are noticed by few, and remembered by almost none; but I am inclined to believe that, if notes were kept of such cases, volumes of interest might be formed.

"My last remark here, reader, is, that we necessarily speak somewhat in the dark of such matters; but you and I will know more shortly Both of us will see and feel for ourselves, where we cannot be mistaken, in the course of a very few months or years."

["Cause and Cure of Infidelity," by Rev. David Nelson—American Tract Society. Pages 264-276.]

CONVERSATION VII.

OPERATION OF MEDICINE.

Lady. Here is a box of pills, sent me, this morning by a neighbor, who was in last evening when my son entered, and having noticed a number of little black spots on his face, said his blood was in a bad state, and that these pills would purify it.

Doctor. Frequently washing the face will remove the black spots, or worms, as they are commonly called. You have, no doubt, often noticed an oily matter on the face; the oil is made by minute glands lying under the external skin; these glands send out a tube to carry the oil to the surface; sometimes dust will collect on the orifice of the tube, and form the black spots your neighbor observed on George; the oil thus prevented egress, becomes hardened, and, when squeezed out, resembles a worm from the shape of the tube.

Lady. What is the use of this oil?

Doctor. To grease or lubricate the external skin, so as to prevent irritation either from atmospheric causes, or the motion of the muscles under it. To return to the pills, can you tell me of any mode by which they could gain access to the blood, to effect such an important object as purifying it?

Lady. I have always considered that medicines operated by changing the nature of the blood; but I now see that they cannot approach it; to do so requires a passage through the lacteals, mesenteric glands, and thoracic duct; and you have informed me that even the pyloric orifice of the stomach will not allow anything to pass it, except properly-prepared chyme.

Doctor. Allowing, for a moment, the pills entered the blood, what would ensue?

Lady. They would be instantly taken out of the circulation either by the lungs or kidneys, which are excreting glands, acting, I suppose, as constables to remove everything offending and unnecessary.

Doctor. There is a complete system of guards stationed in our bodies, to prevent the entrance of improper substances, beginning with the warnings of taste; but unhealthy agents, by presenting themselves too frequently, will at last accustom the sentinels to their appearance, and can then enter with impunity, and without danger of being ejected by the excretory organs.

This fact may sometimes be witnessed in the vegetable kingdom. The late Dr. Mitchell, of this city, had once sent to him a basket of saline-tasting peaches. Around the base of the tree upon which they grew, a quantity of brine had been thrown. The spongioles or leech-suckers at the roots, at first, refused the salty matter admittance, but, their excitability (irritability) being altered by continued contact, at last sucked them up, and thus a strange phenomenon was the result.

Alcohol has produced the same effect on the human system. A surgeon mentions a case of setting fire to the blood of a confirmed drunkard, which he had just drawn, its strong odor tempting the experiment.

Lady. That drunkard was not much removed. I should think, from a state of spontaneous combustion.

Doctor. Probably not; saturating the system with alcohol is perhaps one of the first steps in that process. Bone is composed of a mixture of phosphoric acid and lime (*phosphate of lime*); as an acid is the union of a base with a certain amount of oxygen, phosphoric acid is made of phosphorus and oxygen. When the chemist wishes to exhibit intense combustion to his audience, he throws a piece of phosphorus into a jar of oxygen gas, and produces a blaze rivalling that of the sun. In a healthy state of the system, the life power controls all the elements, and, as shown in the vegetable kingdom, only allows them to unite in a manner that subserves its own purposes; but when lowered and debilitated by excessive stimulus, the power becomes weakened, and finally lost in death; the elements then obey their natural affinities, and a virulent internal combustion ensues.

Lady. The drunkard, in a double sense, then, is a self-moving porter-house. Is it not very strange, that, with all the clear and accurate information known relative to the organs and their functions, such profound ignorance on the subject of the operation of medicine should exist?

Doctor. You have quoted, almost verbatim, the common jargon of the day; it is used by those noted for vague and confused notions on physiology. I do not think any man, who cannot give the rationale of the medicine he prescribes, should be trusted to practice. So far from being dark and in any way incomprehensible, it is easily explained, and the effects of medicine capable of being predicted with almost mathematical certainty.

The study of the different organs in the system, after the life power has departed, is called Anatomy. When living and proper agents stimulate irritability, so as to produce a healthy action of these organs, the study is called Physiology. When improper agents or stimuli act on irritability, an alteration of the vital powers ensues, with a corresponding alteration of function, disease results, and its study is called Pathology. In the latter case, how do you imagine the system can become right again?

Lady. Only, I should think, by the direct interposition of the Almighty?

Doctor. After the Croton aqueduct was finished, the pipes laid down, and the whole in successful operation, do you suppose anything more was required?

Lady. Yes, a company of superintendents and laborers, to constantly inspect every part with the greatest care, and instantly repair whatever breaks in the line, or other damages might occur. The water-works would not even be safe without such a precaution.

Doctor. The life power has an exactly similar reserve—a distinct and powerful conservative principle, called by the older physicians, who were well acquainted with it, the *Vis Medicatrix Naturæ.* Whenever a part is injured, it is the office of this principle to come forward and repair it; so very intelligent appears its operation, that some have attributed the effects to a special interference of the Creator, and others supposed it was the rational soul.

Lady. The two seeds cited in your article on the Vegetable Kingdom, to show the difference between the forces of life and those of chemistry, brought instant conviction to my mind, and the clear conceptions I then acquired have proved serviceable since in pursuing this subject. Can you not illustrate the conservative principle in a similar manner?

Doctor. Have you ever read the natural history of the dormouse?

Lady. It is one of the hybernating or winter-sleeping animals; in summer it is very lively and frolicsome; as autumn approaches, it becomes very fat; and when cold weather sets in, retires to a concealed nook to sleep out the winter, but comes forth in the spring almost fleshless. While in the hybernating state, its breathing is very slow, and its temperature the same as that of the surrounding atmosphere.

Doctor. If a dormouse is taken from its sheltered hole, in the midst of winter, and placed in a receiver surrounded with a freezing mixture, some very curious phenomena will be evolved. As the cold increases, and the little portion it had is becoming absorbed, its breathing will be proportionally slower, and the heart pulsate more feebly; this state of things continues—the animal constantly failing—until a point is reached where remaining another moment would destroy life. At this very point an unseen power presents its workings, a hidden spring is touched, and an evident change takes place with extreme rapidity; the pulse becomes fuller and faster; a warmth diffuses itself over the surface; the eyes brighten and limbs contract; finally, in less than three minutes, the little animal is as hot, and his pulse as rapid, as in the midst of summer. Take the dormouse now out of the receiver, and expose him to the open air, and his torpidity gradually returns; it is then best to restore him to his former nook. The conservative power that preserved the dormouse from death, we name the Vis Medicatrix Naturæ.

Lady. How is this power developed in the human body?

Doctor. Let us suppose a combination of peculiar circumstances, as the poisonous air of a marsh (*marsh miasmata*), to act on our excitability, an injurious influence is immediately exerted upon the system; it sinks quickly, a chill is felt, and this chill increases, lowering and depressing us, till a point is gained (as in the dormouse experiment), from which we cannot descend with life; at this point the conservative power awakes; it acts on the other powers, more especially on the brain; the nervous secretion becomes altered and radiated to every part; a change is induced, fever ensues, and with it a long train of other symptoms which finally terminate in profuse perspiration, and a restoration to health.

Lady. Then fever, and the symptoms which are commonly considered the disease itself, are nothing more than signals of battle going on within for the purpose of liberating us from injurious influences. If such be the case, why does the physician interfere in the matter at all, and of what use are doctors?

Doctor. The true physician remains a spectator, or rather general, watching the battle's progress with a careful eye; knowing each separate stage and crisis, and how far nature can be trusted, he often does nothing more than to clear the battle-field, (remove injurious influences,) and allow her to combat alone.

Lady. Suppose it becomes necessary for him to interfere?

Doctor. If nature cannot cope successfully with the existing form of disease, it is his business to substitute another form which she can conquer. It is a pathological law that there can be but one disease at a time in the system; and, acting on that law, he brings some influence stronger than the original one to bear on excitability; in other words, he must produce a different alteration of the vital powers, which he is certain the conservative principle can rectify.

Lady. If it is stronger than the original one, why should it not be still worse for the vis medicatrix to combat?

Doctor. Each thing produces an influence peculiar to itself; and our ideas of strength are only comparative. What will powerfully depress excitability may give the vis medicatrix little effort to overcome, and *vice versa.*

There is a class of bodies, which, properly prescribed, produce a decided and powerful effect on excitability; an effect which experience has taught us it is always in the power of the vis medicatrix to subdue, and restore the system when laboring under their influence to health. Such are the medicines, as opium, camphor, arsenic, and quinine.

Lady. Is arsenic a medicine?

Doctor. A very useful one. You must not suppose that its only use was to make stearine candles and German silver spoons. Nothing in nature was ever created for murderous purposes; it is man who perverts them.

Lady. After the effect is produced on excitability by the medicine, the original malady disappears; the physician is then treating sickness he has himself induced, and curing diseases of his own infliction.

Doctor. Exactly so; and this shows you what care and judgment should be exercised in selecting the right medicine. Cases occur in which, out of a list of twenty purgatives, one alone is suited to the existing nature of the complaint.

Lady. But, doctor, how can you discover all these separate modifications of disease; how can you possibly tell what is going on within the system?

Doctor. In the same manner as we discover the existence of a life principle and its properties—that is, by observing the phenomena they exhibit.

You will remember that every part of the body has a separate office to fulfil, that there are two lives, an animal and vegetable, in action, developing distinct series of phenomena, and that the study of all the functions in health is physiology.

When pernicious influences act, and the whole train becomes disordered, the physician, previously well acquainted with the results produced by healthy actions, observes the changed appearances disease presents to his view, and from these deduces his opinion relative to the amount of injury, and acts accordingly.

Lady. Will you be kind enough to apply this to a particular case?

Doctor. I was sent for, yesterday, to see a man, who I was told had been ill for two or three days. On entering the room, and observing his countenance (often a sufficient index by itself to the experienced), its wild and haggard aspect led me to look for abdominal disease.

Sitting down by his bed, I inquired the history of the case, and then proceeded (without his suspecting it) to a regular examination.

The functions of animal life are sensation, thought, and locomotion. Everything had acquired a bitter taste to him, and noise of any kind was agonizing; his mind was wandering; and, to conclude with animal life, he was feeble as a child.

Turning to the vegetable system, I found respiration more frequent than in health, but perfectly full, and no pain about the chest; the pulse fast and rather weak, but steady; this absolved the heart and lungs. Upon examining the tongue, I found it covered with a thick yellowish-brown fur, characterizing trouble in the liver; and as the lining membrane for nostril's, mouth, stomach, liver-tube, etc., is one continuous sheet, disease of one part would soon extend along the whole surface by sympathy, and, reaching the tongue, paint on its surface the cause of trouble for the information of the physician; the skin had a yellowish tinge, was at times cold and moist, and at others hot and dry; the bowels and liver, more especially the stomach, were very sensitive to pressure, and vomiting came on every ten or fifteen minutes, at which times he ejected a greenish watery fluid, etc., etc.

The day of his attack, he had been eating a very hearty dinner, with some unripe fruit as dessert, and then quickly returned to work (he was a stone-cutter) beneath a hot sun; soon getting sick, he went home, where an old woman, a great doctress of the neighborhood, had been summoned to attend him; she called his disease *janders*, and every hour or two, during the day, poured down his stomach strong tansy tea.

I concluded that his unwholesome dinner had been imperfectly digested, and when the chyme wished to pass the pyloric orifice, the sentinel tightly contracted his muscular ring, and refused admittance by blocking up the passage. The hot sun, acting on the brain, altered the nervous secretion, a share of which, being radiated to the stomach, made matters worse; and the stomach, finding itself utterly incapable, in such circumstances, of re-digesting the food, cast it off entirely by the œsophagus; the bile that was prepared to act on the chyme being poured out about the time it ought to be there, and finding nothing to act on, altered the excitability of the sentinel at the pyloric orifice, and gained admission into the stomach, from whence it was immediately thrown out, sharing the fate of the food. To crown all, the tansy tea, by producing irritation, kept up the morbid action, involving all the parts connected with the lining membrane, as the liver, etc.

I caused him to be removed into a cool and quiet room; had his feet bathed with mustard and warm water, to assist the action of a mustard plaster on his stomach; and then caused a strong injection to be administered, leaving a powder to be taken at a certain time afterward. The vomiting ceased, the bowels moved, a terrible headache (which I forgot to mention in my notice of sensation) disappeared, etc., etc., and the next morning found him free from all pain, but very weak. *This is called the active plan of treatment.*

Very frequently, a mere removal of injurious influences, by allowing the vis medicatrix free scope, will be sufficient to cure. *This is called the expectant plan of treatment.*

Lady. Nature, after all, has to fight her own battles, the physician generally doing nothing, except, by removing injurious influences, to show fair play; the utmost he can perform is to substitute one morbific cause for another. If it were not for the vis medicatrix, there would be no science of medicine—we should all die off as soon as injured.

Doctor. I am glad that you understand so well what I have been endeavoring to teach; you have now learned enough of the principles of medicine to pursue the study as much as you choose.

Lady. Does fascination act by inducing a new disease?

Doctor. Most assuredly; it forms no exception to the mode of operation of the others, from all of which it differs, however, by giving the vis medicatrix less effort to displace its effects. I suppose this fact will make no advice needed with regard to fascinating healthy persons, as direct disease is thereby induced.

Lady. Why did I not get well directly after the first fascination?

Doctor. From the influence of habit, and the same causes still acting that produced your disease in the first instance. Directly after the effect of each operation was over, and before the disease again seized upon you, the system had time to gain strength; as the intervals increased, more strength was acquired, until, at length, your frame was strong enough to resist the injurious influence, and then your recovery was complete.

Lady. In what manner does the *water cure* operate? A friend of mine was very anxious that I should try it; he thought every case of chronic disease in the continent of Europe would soon be cured at Graefenberg.

Doctor. I have very little doubt but that it would have killed you. You can no more expect one particular medicine, or plan of treatment, to cure all diseases, than to find one book which would suit all readers; or one coat capable of fitting all men. Wherever life is present, variety is certain to be found, as well in disease as in health. In certain cases, fascination, as a curative agent, is invaluable; but, recommend it as a succedaneum, and it is certain to do much mischief.

Hydropathy, as a curative agent, acts exactly on the dormouse principle; it depresses until the vis medicatrix rises to the rescue. The process you will observe, has already been gone through with at the first time of the attack; it says to nature, "You have failed in your attempt, try again." In many chronic cases of long standing it is certainly a valuable remedy; that it is a new discovery, or that it will supercede all other remedies, are both ridiculous ideas.

Lady. I am aware, doctor, that you have attentively examined homœopathy; and since such a golden opportunity presents itself for inquiry, I should be much obliged if you would tell me what it really is worth; many of my friends think its cures are almost miraculous?

Doctor. Cases of medical treatment under such circumstances, stand in the same relation to truth as the tricks of a juggler to the deductions of science; such reports, in fact, have elicited the remark that "medical facts are medical lies." Whatever militates against common sense and experience cannot be received as evidence.

Lady. Their infinitessimal doses lead me to conclude that their object is to let nature, in all cases, take care of herself. Much harm cannot be done except by inducing delay.

Doctor. That alone should condemn the whole matter, as no where are "delays so dangerous" as in medicine, a life often turning on an hour of time. My study of Hannehman has led me to consider him possessed of remarkable talent, and that the whole system of homœopathy is nothing more than a disguised recommendation of fascination. Do you remember how he tests the strength of his medicines?

Lady. By the number of dilutions; the greater the number, the more powerful the medicine.

Doctor. That simple fact should have led to the discovery of his meaning, the solution of his enigma. He directs his medicines to be prepared by hand, and considers them increased in strength proportionally as the hand is laid upon them: this is nothing more than a practice, long known, of *mesmerizing* medicine for patients.

Lady. Still I should have thought that where so much was at stake, he would have given some intimation of his secret more plainly than that; that he would even in some cases direct them to fascinate.

Doctor. He has done so: where nature alone will cure, or the expectant plan will suffice, he directs the minimum doses; in more serious cases, you must, to use his own words, "stroke the patient down with the palm of the hand till relief be obtained."

His object, in concealing his real sentiments, was doubtless to escape the ridicule of the age in which he lived. If he possessed an acute sense of mirthfulness, great must have been his merriment to have known that glass factories, in many countries, were solely employed blowing his little vials; thousands of apothecaries engaged in manufacturing medicines to fill those vials; machines inventing to prepare his triturations and dilutions; and, finally, hosts of the sons of Esculapius, equipped with whole pharmaceutical establishments in their coat pockets, visiting their patients, and who, ever and anon, were drawing forth the *organon* of him upon whom they looked as more than mortal, to seek fresh instructions regarding the best method of dispensing sugar plums.

It is rarely that persons will take pains to examine into any system of medicine; the small amount of medical knowledge out of the pale of the profession, owing most likely to the small amount within, has given an idea that the whole subject is nothing more than a system of guessing; and those entertaining this view are rather pleased with homœopathy, as being a practice in which wrong guessing cannot produce much detriment.

Another source of injury to the science of medicine has been various hypotheses started by men who were not properly versed in the laws of life. During the prevalence of a certain deadly pestilence in the West Indies, the blood was, in all cases in those affected, dark, almost black. A physician, who had been bleeding a patient, found the dark blood, as soon as it gained the bowl, become of a bright healthy-looking red; and, upon examining the matter, found the florid appearance was owing to some table salt which had been accidentally left in the bowl; his sapient brain instantly conceived the idea that it was the loss of muriate of soda (common salt) in the blood that caused the fever. This fancied discovery changed his whole plan of treatment, and his after practice consisted in injecting solutions of salt into the veins, and giving it by the stomach. His fellow physicians followed his example as soon as the matter was published. The uniformly fatal termination of all cases treated in this absurd manner at length obliged the doctors to relinquish the practice; but the hypothesis, like the bodies of ancient heroes, was accompanied to the grave by thousands of victims slaughtered to its honor.

Lady. What is the meaning of transfusion of blood?

Doctor. It was discovered that where death would ensue from the loss of blood, taking a supply from the veins of another and directly introducing it into that of the patient, would preserve life in many instances. The French received it with open arms, and were eager to embrace the advantages it offered. Supposing the secret of perpetual youth was made known, old age hastened to fill its veins with the blood of juvenescence. Though the majority who tried the plan fell victims to its fatal influence, it still continued to be the enthusiasm of the day till a prince of the blood royal was added to the list of victims. The laws immediately made it a penal offence, and it fell into disuse.

A knowledge of the laws of life would have prevented all this victimizing, as it would also correct many popular prejudices. You wished me, some time since, to vaccinate your son George, because more than seven years had elapsed since he had taken the cow-pox, and I could not then explain the reason why I did not think it was necessary.

Our bodies are perpetually changing; they are not the same to-morrow as to-day. This fact, which they could perceive but not explain, puzzled the ancients: "To be another, yet the same!" was the astonished exclamation of an old philosopher. By the constant absorption and deposition of matter, it has been computed that we undergo a total change every seven years; and persons informed of this, think the effect of vaccination worn off, when every particle of matter that was present in the body at the time of the operation is departed. The life principle is entirely forgotten in this estimate; impressions made on it are indelible; every particle of matter it directs to be removed, is replaced by an exactly similar particle; thus a depression in the skin, or mark of any kind, often remains for life. When perfectly vaccinated, the system is forever surely guarded against the attacks of small-pox; but when any doubt exists relative to the former effect, it is well to repeat the operation.

You must not be surprised to find doctors often disagreeing with this explanation; for there are as many sects in medicine as in theology. Many of them, perhaps a majority, consider the human body a vast chemical laboratory, and scoff at the notion of a life power. Some of these affirm, and others deny, the existence of an immortal soul, by which last, when allowed to remain, those who believe in it solve all the living problems chemistry cannot explain.

Since the days of Hippocrates, or rather his ancestor Esculapius, there has always been a church of faithful priests of nature, who closely observed her laws and obeyed her dictates. One after another of these has added his quota to the general amount of information, till, being fully prepared for generalizing, the great principles of health and disease have been established, which no doubt will continue in force till this mortal puts on immortality. These true physicians are known under the name of VITALISTS, or observers of life.

Our opponents, when they talk of uncertainty and confusion, but proclaim the chaos existing in their own minds, on which the spirit of truth had never moved to correct disorder, and impart life and light.

CONVERSATION VIII.

PREVISION.

Doctor. The patient, while under the influence of fascination, will, in some cases, often materially assist the treatment by prescribing remedies for himself, his instinctive faculties undergoing remarkable developments.

This power has been named PREVISION; but I think it is susceptible of a two-fold distinction—that which relates to the organism, and by perceiving "*a series of organic movements, consequent one upon the other*," and thence foretelling results; and that which is probably the communication of a superior being, in attendance upon us, and whose revelations are made only for special purposes.

We will name the first *organic*, and the second *revealed*, prevision.

Lady. This organic prevision seems to me nothing more than a development of the vis medicatrix naturæ.

Doctor. It certainly resembles it in many particulars, and the fact of its being possessed by the lower animals to a considerable extent favors your view.

Bruce tells us that the African Arabs secure themselves from the mortal consequences attending the bite of serpents, by chewing a particular root, and washing themselves with an infusion of certain plants in water; he gives a particular account of several of these plants, some of which seem only capable of acting against the power of the serpent; others, only against that of the scorpion; and a third sort, against both; and all wil operate both as an antidote and preventive. Vargus throws considerable light on the manner in which the Arabs acquired the knowledge of these plants; he was a gentleman residing at Santa Fe, (S. A.,) who was accustomed to venture into the open fields and seize the largest and most venomous serpents, from whose bite he was perfectly protected by drinking a small portion of the juice of the *quaco-withy*, and inserting some in punctures made in his hands, breast, and feet. The name of the plant is derived from the Indian term for the serpent hawk, who was observed, before attacking poisonous serpents, to suck its juice, which, when tried for the same purpose by mankind, proved equally efficacious.

An old writer long since remarked that no fact appeared better attested, in the history of human knowledge, than that of a proficiency in the art of practical physic, far beyond the scope of their other attainments; forming a curious but unfailing trait in the character of savages. Now, whether that proficiency was attained by observations made on the instincts of the lower animals, or the result of their own organic prevision in a fascinated state, it is hard to discover; perhaps it was compounded of both.

The apes of Abyssinia are reported to have, by trials on themselves, first exhibited to men the laxative properties of the *cassia fistula*. A dog having had some sheep's blood injected into his veins, was observed to immediately begin eating grass; and this was considered by the transfusers sufficient evidence that the nature of each animal resided in the blood, and that the dog would in future partake of the qualities of the sheep. A gross error; the organic provision of the dog warned him that to produce vomiting was to obtain relief from the pain caused by his cruel tormentors, hence his conduct; for he is commonly observed, when sick, to eat a quantity of prickly grass, an expedient that seldom fails to answer the purposes of an emetic.

Lady. I was once called, while in the country, to witness something of this kind. It was a toad fighting with a large spider; every time the toad was bitten, it ran off, and, having eaten some plantain leaves, would return to the fight. A person present, while the frog was trying to reach the plantain, covered it up; he swelled up immediately, and died in consequence.

I am aware that hogs, after being kept for some time without salt, refuse food, and greedily devour ashes or cinders in great quantities. Some time ago, I met with an anecdote of a gentleman who, when sick, never used medicine; giving, as reason, the example of a monkey in his possession, that, if ill, would abstain from food a few days, when he was always sure to recover health and spirits.

Doctor. But that the fascinated patients of the Egyptian temples remembered their visions, I should have classed such cases in organic prevision: as an instance of the latter faculty, I will quote a case from the report of the commission of the Royal Academy of Medicine, and vouched for by them.

"Pierre Cazot, twenty years of age, a working hatter, born of an epileptic mother, has been subject, from ten years of age, to attacks of epilepsy, which have recurred five or six times a week up to the time when he entered the Hôpital de la Charité, in the early part of the month of August, 1827. He was at once magnetized by M. Foissac, was placed in the magnetic sleep at the third sitting, and became somnambufit at the tenth, which took place on the 19th of August. It was on that day, at nine o'clock in the morning, that he announced, that on the same day, at four o'clock in the afternoon, he should have an attack of epilepsy; but that it might be prevented, if he was magnetized a little before that period. The verification of his prediction was preferred—and, therefore, no precaution was taken to prevent the paroxysm; we contented ourselves with observing him, without his having any suspicion that we were doing so. At one o'clock he was seized with a violent headache;—at three he was obliged to go to bed,—and at four o'clock precisely the paroxysm attacked him, and lasted about five minutes. Two days afterwards, Cazot being in somnambulism, M. Fouquier suddenly thrust a pin, of an inch long, between the thumb and the forefinger of the right hand; with the same pin, he also pierced the lobe of the ear;—and the eyelids being separated, the white of the eye itself was repeatedly struck with the head of the pin without occasioning the smallest indication of sensibility.

"The commission met at the Hopital de la Charité on the 24th of August, at nine in the morning, in order to observe the experiments which M. Fouquier, one of its members, proposed continuing upon this invalid.

"At this séance, M. Fouquier took his station about six feet in front of Cazot: he looked at him firmly—made use of no passes with the hands,—observed the most perfect silence, and Cazot was asleep in eight minutes. At three different times, a bottle of ammonia was held under his nose—the countenance became flushed—the breathing quickened, but he did not awaken. M. Fouquier thrust a pin an inch long into the fore-arm; afterwards, another pin was thrust to the depth of two lines, obliquely under the chest;—a third was similarly inserted into the pit of the stomach; and a fourth was thrust perpendicularly into the sole of the foot. M. Guersent pinched him in the fore-arm so severely as to leave a bruise mark;—and M. Itard leaned the whole weight of his body upon his thigh.

"We endeavored to tickle him by lightly passing a little piece of paper under the nose, upon the lips, upon the eyebrows, the eyelashes, the neck, and the soles of the feet—but nothing could awaken him. We then urged him with questions. 'How many more attacks will you have?' 'During a year.' 'Do you know whether these attacks will be near to each other?' 'No.' 'Will you have one this month?' 'I shall have a fit on Monday the 27th, at twenty minutes before three o'clock. 'Will it be a strong one?' 'It will not be half so strong as the last.' 'On what other day will you have an attack?' After an expression of impatience, he answered,—'A fortnight hence, that is to say, on the 7th of September.' 'At what hour?' 'At ten minutes before six in the morning.'

"The illness of one of his children obliged Cazot to leave la Charité on that very day, the 24th of August. But it was agreed that he should return on Monday the 27th, early in the morning, in order that the fit which he had declared to be impending in the afternoon of that day, at twenty minutes before three, might be accurately observed

"The steward, having refused to take him in when he presented himself for admittance, Cazot repaired to the house of M. Foissac in order to complain of this refusal. M. Foissac, as he afterwards told us, preferred dissipating this attack by magnetism, to being a solitary witness to the occurrence,—and consequently we were unable to establish the exactitude of this prevision. But it still remained for us to observe the paroxysm which he had announced for the 7th of September. M. Fouquier having caused Cazot to re-enter the hospital on the 6th, under the pretext of paying him some attentions, which he could not pay out of that establishment, had him magnetized in the course of the day of the 6th by M. Foissac, who put him to sleep by the simple act of his will, and by steadfastly looking at him. In this sleep, Cazot repeated, that the next day he should have an attack at ten minutes before six in the morning, and that it might be prevented if he was magnetized a little before. At a signal agreed upon, and given by M. Fouquier, M. Foissac, of whose presence Cazot was ignorant, awakened him in the same way as he had put him to sleep, by the sole act of his will, notwithstanding the questions which were addressed to the somnambulist, and which had no other object than to conceal from him the moment in which he ought to waken.

"In order to be witnesses of this second attack, the commission met on the 7th of September, at a quarter before six in the morning, in the ward St. Michel, at la Charité. There they were informed, that the evening before, at eight o'clock, Cazot had been seized with headache, which had tormented him all night,—that this pain had occasioned the sensation of beating in his head, and that he had had some darting sensations in his ears. *Ten minutes before six* o'clock we witnessed the epileptic attack, characterized by contraction and stiffness of the limbs,—by the repeated and forcible tossing of the head backwards,—by the convulsive closing of the eyelids,—by the retraction of the globe of the eye towards the roof of the orbit,—by sighs,—by screams,—by insensibility to severe pinching,—and by the biting of the tongue between the teeth. This set of symptoms lasted for about five minutes, during which, he had two remissions of some seconds each, and then a painful relaxation of the limbs, and sense of general exhaustion.

"On the 10th of September, at ten o'clock at night, the commission met again at the house of M. Itard, in order to continue its inquiries upon Cazot: the latter was in the library, where conversation had been carried on with him till half-past seven, at which time, M. Foissac, who had arrived since Cazot, and had waited in an ante-chamber separated from the library by two closed doors, and a distance of twelve feet, began to magnetize him. Three minutes afterwards Cazot said, *I think that Foissac is there, for I feel myself oppressed and enfeebled.* At the expiration of eight minutes he was completely asleep. He was again questioned, and assured us, that in three weeks from that day, that is, on the first of October he should have an epileptic paroxysm at ten minutes before noon.

"It was desirable to observe with equal care, as on the 7th of September, the epileptic attack which he had predicted for the 1st of October. With this view, the commission met together on that day at half-past eleven, at the house of M. Georges, manufacturer of hats, No. 17, Rue des Menetriers, where Cazot lived and worked. We learned from M Georges, that he was a very regular workman, whose conduct was excellent,—and that he was, both by the simplicity of his mind, and by his moral principles, absolutely incapable of lending himself to any deception; that he had had no attack of epilepsy since the one which the commission had witnessed at la Charité;—that not feeling himself well that morning, he had remained in his own chamber, and was not at work;—that at this moment, there was with him an intelligent man, whose veracity and discretion might be relied upon; that this man had not told him he had predicted an attack for that day;—that it appeared that since the 7th of September, M. Foissac had had some communication with Cazot, but without permitting the inference that he had in any way recalled to him his prediction, since, on the contrary, M. Foissac attached the highest importance to the circumstance, that no one should speak to the patient on the subject of what he had announced. At five minutes before twelve M. Georges went up into a room situated immediately under that occupied by Cazot, and in one minute afterwards he came to inform us that the attack had supervened. We hastily ran to the sixth story, that is, MM. Guersent, Thillaye, Marc, Gueneau de Mussy, Itard, and the Reporter, where, on our arrival, the watch pointed at one minute to twelve by the true time. Assembled around the bed of Cazot, we distinguished the epileptic paroxysm characterized by the following symptoms: tetanic stiffness of the body and of the limbs—tossing of the head, and occasionally of the trunk of the body backwards,—a convulsive retraction, and up-turning of the eye, so that the white of the eye only is visible,—a very remarkable fullness of the face and neck,—contraction of the jaws,—partial convulsive movements of the fibres of the muscles of the right arm and fore-arm;—soon afterwards so decided a tetanic attack, that the trunk of the body was so raised as to form the segment of a circle, of which the only bases were formed by the head and the feet; which movements terminated by a sudden collapse. A few moments after this attack, that is, after one minute of relaxation, a new paroxysm, similar to the preceding one, took place; there were uttered inarticulate sounds—his respiration very frequent and interrupted,—the larynx being rapidly and violently raised and depressed; and the pulse beating from 132 to 160 in a minute:—there was no frothing at the mouth, nor contraction of the thumbs to the inside of the palm of the hand. At the end of six minutes the paroxysm terminated by deep sighs, by relaxation of the limbs, and opening of the eyelids.

"The invalid fixed an astonished look upon the persons present, and complained of being painfully stiff, especially in the right arm.

"Although the commission could not doubt the veritable action produced by magnetism upon Cazot, even without his knowledge, and at a certain distance from him, yet they desired to acquire a new proof of this state;—and as it had been proved at the last séance, that M. Foissac had had some communication with him, and therefore *might* have told him that he had announced an attack for the 1st of October, the commission were also desirous, while submitting Cazot to some new trials, to lead M. Foissac himself into error as to the day on which his epileptic should have announced as the next for the return of the paroxysm. By this plan we should shelter ourselves from every species of connivance, even supposing that a man, whom we had always seen honest and upright, could possibly have any secret or collusive understanding with a man without education, without intelligence,—and that in order to deceive us. We will confess that we did not ourselves do this injustice, even in thought, to either the one or the other; and we feel bound to render the same testimony to MM. Dupotet and Chapelain, of whom we have more than once had occasion to speak to you.

"The commission met again on the 6th of October at noon, in the library of M. Bourdois, at which hour Cazot arrived there with his child, M. Foissac having been invited to come at half-past twelve: he was exact to his appointment, and remained in the ante-room, without the cognizance of Cazot, and without any communication with us. We sent to inform him, however, by a side door, that Cazot was seated on a sofa, placed ten feet from the door, which was closed, and that the commission requested he would magnetize, and awaken him also at that distance, he, M. Foissac, remaining in the ante-room, and Cazot in the library.

"At twenty-three minutes before *one*, while Cazot was occupied with the conversation which we carried on among ourselves, or examining the pictures which adorn the library, M. Foissac, placed in the next room, began to magnetize him: we remarked that in four minutes Cazot began slightly to droop the eyelids—that he had a restless unquiet air—and that in nine minutes he was asleep. M. Guersent, who had attended him for his epileptic attacks at the Hopital des Enfants, asked him if he remembered him:—he answered affirmatively. M. Itard inquired, when he should have a paroxysm. He replied that it would be this day four weeks, (the 3rd of November,) at five minutes after four in the afternoon. He was then asked when he should have another, to which he answered, after apparent reflection and hesitation, that it would be five weeks after the one which he had just indicated—the 9th of December, at half past nine in the morning.

"The procès verbal of this séance having been read in the presence of

M. Foissac in order that he might sign it with us, we wished, as it has been above remarked, to lead him into error: and in reading it to him, before presenting it for signature to the members of the commission, the reporter read, that the first attack of Cazot would take place on Sunday the 4th of November, whereas the somnambulist had fixed Saturday the 3rd. He practised the same deceit with regard to the second; and M Foissac took a memorandum of these erroneous indications as if they had been exact; but having some days afterwards put Cazot into somnambulism, as he was accustomed to do, in order to dispel his headaches, he learned from him, that it was the 3rd and not the 4th of November, that he ought to have a return of the fit, and he informed M. Itard of this on the 1st of November, believing that there had been an error in the procès verbal, of which, nevertheless, M. Itard maintained the assumed correctness.

"The commission again took all the necessary precautions to enable them to observe the attack of the 3rd of November;—they met at four o'clock in the afternoon at the house of M. Georges; they learned from him,—from his wife,—and from one of the work-people, that Cazot had gone through his customary labor all the morning, till two o'clook in the afternoon, and that during his dinner, he had complained of headache; that nevertheless he had returned to his work, but that the headache increasing, and having felt giddy, he had retired to his own room—had gone to bed, and to sleep, MM. Bourdois, Fouquier, and the reporter, preceded by M. Georges, then went up stairs to Cazot's room: M. Georges alone went in, and found him in a profound sleep, which he begged of us to observe through the door, which was partially open to the staircase. M. Georges spoke loudly to him—shook him rather rudely, pulled him by the arm without awakening him. Cazot was then seized with the painful symptoms which constitute an attack of epilepsy, and precisely similar to that which we had formerly observed upon him.

"The second attack announced at the séance of the 6th of October, for the 9th of December, that is, two months beforehand, took place at half past nine, or a quarter of an hour later than had been predicted, and was characterized by the same precursory phenomena, and by the same symptoms as those of the 7th of September, 1st of October, and the 3rd of November.

"Lastly, on the 11th of February, 1828, Cazot fixed the period of a new attack for the 22nd of the following April, at five minutes before noon; and this announcement, like the preceding ones, was verified within five minutes, that is, at ten minutes before twelve. This attack was remarkable for its violence, for the species of madness with which Cazot bit his hand and fore-arm,—for the violent and repeated shocks with which the body was distorted and for its having lasted thirty-five minutes, when M. Foissac, who was present, magnetized him Very soon, this convulsive state yielded to the state of magnetic somnambulism, during which Cazot got out of bed, sat down upon a chair, and said that he was very much fatigued;—that he should have two more attacks one of which should be nine weeks from to-morrow (June 23rd,) at three minutes after six. He would not fix the second attack, because he must think of what would take place beforehand, (at this moment he sent away his wife, who was present,) and added, that in about three weeks after the attack of the 23rd of June, he should go mad; that his madness would last three days, during which he should be so mischievous, that he should attack every body;—that he should even ill-treat his wife and his child; that he ought not to be left alone with them;—and that he did not know, that he should not kill an individual without intending it. It would be necessary to bleed him from both feet; '*then*,' said he, '*I shall be well for the month of August; and once cured, the disorder will not return, whatever circumstances may happen to me afterwards.*'

"It was on the 22nd of April, that all these previsions were announced to us, and two days afterwards, the 24th, Cazot wishing to stop a runaway horse which had got the bit between his teeth, was violently thrown down against the wheel of a cabriolet, which occasioned a fracture of the left supra-orbitary ridge, and bruised him horribly. He was conveyed to the Hopital Beaujon, where he died on the 13th of May. On inspecting the body, and opening the head, there were found traces of recent membranous inflammation,—purulent collections under the integuments of the skull, and at the extremity of the choroid plexus, a substance externally white, but yellowish internally, and which contained some small hydatids.

"We see in this history a young man, subject for years to attacks of epilepsy, for which he had been treated successively at the Hopital des Enfants, and at Saint Louis, and in consequence of which he had been exempted from military service. Magnetism acted upon him, although he was perfectly ignorant of what was going on,—and he became somnambulist. The symptoms of his disorder were ameliorated; the paroxysms diminished in frequency;—his headaches, his oppression disappeared under the influence of magnetism;—he prescribed for himself a treatment appropriate to the nature of his malady, and from which he promised his restoration. Magnetized *without his knowledge*, and from a *distance*, he fell into somnambulism, and was aroused from it with the same promptitude, as if he had been magnetized close at hand. Finally, he indicated with extraordinary precision, one or two months beforehand, the day and the hour of the return of the epileptic attack. *Yet notwithstanding he was thus endowed with prevision for attacks at so great a distance of time, and even for attacks which would never take place, he did not foresee, that in two days he should meet with a fatal accident.*

"Without attempting to reconcile all which at first sight is apparently contradictory in such a history, the commission would draw your attention to the fact that the previsions of Cazot *related only to his attacks*;—that they are reducible to the knowledge of organic modifications in him self, which were preparing, and which would arrive as the necessary result of the *interior functions;* that these previsions, although of greater extent, are really precisely similar to those of certain other epileptics, who recognize by divers premonitory symptoms, such as headache, giddiness, irritability, the *aura epileptica,* that they shall soon have an attack. Is it then surprising, that these somnambulists, whose sensations, as you have seen, are extremely acute, should be able to foresee their attacks a long time previously, according to some symptoms, or interior impressions, which escape the notice of waking men? It is in this way, gentlemen, that we may understand the prevision attested by Aretæus in two parts of his immortal works,—by Sauvages, who also records an example,—and by Cabanis. Let us also add, that the prevision of Cazot, was not absolute, and unalterable, but conditional; since in predicting an attack, he announced that it would not take place, if he was magnetized, and that in point of fact, it did not take place:—the prevision is *wholly organic, wholly interior.* Thus we easily understand, why he did not foresee an event *wholly exterior,*—that is to say, that accident led him to meet a runaway horse,—that he was imprudent enough to try to stop him, and that he received a mortal injury. Thus he might foresee an attack which was not to happen. It is the hand of a watch, which in a given time, ought to pass over a certain portion of its facial circle, and which does not describe that portion, because the watch is broken."

Cases of revealed prevision are quite as common as those of organic, and have been known a much longer period. Socrates presented a remarkable instance of this kind. He informed his disciples that he possessed a genius, who told him future events and directed his conduct, and whom he never failed to obey. He often warned his friends (by the advice he told them of his genius,) against certain courses of action, and, in every case where they refused to profit by his counsel, disastrous results followed.

He predicted all the events of any importance in his own life, and lastly, his death and its mode. After sentence was passed on him, his enemies waited but the return of a ship to put it into execution. The night before the vessel was expected in, his disciples were grieving bitterly to think that before another evening the philosopher would be taken from them; he informed the sorrowful group around him that the ship had been injured at sea, and would not return for three days; and the event happened as he predicted.

Cazotte's famous prediction was verified, even to the minutest point, in the history of the French revolution. Newnham takes it from La Harpe; you cannot fail to be intensely interested in its perusal—its truth is undoubted.

"It appears but as yesterday, and yet, nevertheless, it was at the beginning of the year 1788. We were dining with one of our brethren at the Academy—a man of considerable wealth and genius. The company was numerous and diversified—courtiers, lawyers, academicians, etc., and, according to custom, there had been a magnificent dinner. At dessert, the wines of Malvoisin and Constantia added to the gayety of the guests that sort of liberty which is sometimes forgetful of bon ton:—we had arrived in the world, just at that time when anything was permitted that would raise a laugh. Chamfort had read to us some of his impious and libertine tales, and even the great ladies had listened without having recourse to their fans. From this arose a deluge of jests against religion. One quoted a tirade from the *Pucelle;* another recalled the philosophic lines of Diderot—

'Et des boyaux du dernier prêtre,
Serrez le cou du dernier roi'—

for the sake of applauding them. A third rose, and, holding his glass in his hand, exclaimed: '*Yes, gentlemen, I am as sure that there is no God, as I am sure that Homer is a fool;*' and, in truth, he was as sure of the one as of the other. The conversation became more serious; much admiration was expressed on the revolution which Voltaire had effected, and it was agreed that it was his first claim to the reputation he enjoyed. He had given the prevailing tone to his age, and had been read in the ante-chamber as well as in the drawing-room. One of the guests told us, while bursting with laughter, that his hairdresser, while powdering his hair, had said to him: '*Do you observe, sir, that although I am but poor miserable barber, I have no more religion than any other?*' We concluded that the revolution must soon be consummated; that it was indispensable that superstition and fanaticism should give place to philosophy, and we began to calculate the probability of the period when this should be, and which of the present company should live to see the *reign of reason.* The oldest complained that they could scarcely flatter themselves with the hope; the younger rejoiced that they might entertain this very probable expectation; and they congratulated the Academy especially for having prepared this *great work*, and for having been the great rallying point, the centre, and the prime mover of the liberty of thought.

"One only of the guests had not taken part in all the joyousness of this conversation, and had even gently and cheerfully checked our splendid enthusiasm. This was Cazotte, an amiable and original man, but unhappily infatuated with the reveries of the illuminati. He spoke, and with the most serious tone. 'Gentlemen,' said he, 'be satisfied; you will all see this great and sublime revolution, which you so much desire. You know that I am a little inclined to prophesy; I repeat, you will see it.' He was answered by the common rejoinder: '*One need not be a conjuror to see that.*' 'Be it so; but perhaps one must be a little more than conjuror for what remains for me to tell you. Do you know what will be the consequence of this revolution—what will be the consequence to all of you, and what will be the immediate result—the well-established effect—the thoroughly-recognized consequence to all of you who are here present?' 'Ah!' said Condorcet, with his insolent and half-suppressed smile, 'let us hear—a philosopher is not sorry to encounter a prophet.' 'You, Monsieur de Condorcet—you will yield up your last breath on the floor of a dungeon; you will die from poison, which you will have taken, in order to escape from execution—from poison which *the happiness* of that time will oblige you to carry about your person.'

"At first, astonishment was most marked; but it was soon recollected that the good Cazotte is liable to dreaming, though apparently wide awake, and a hearty laugh is the consequence. 'Monsieur Cazotte, the relation which you give us is not so agreeable as your Diable Amoureux,' (a novel of Cazotte's.)

"'But what diable has put into your head this prison, and this poison, and these executioners? What can all these have in common with philosophy and the reign of reason? 'This is exactly what I say to you; it is in the name of philosophy—of humanity—of liberty; it is under the reign of reason that it will happen to you thus to end your career; and it will indeed be *the reign of reason*, for then she will have her temples, and indeed, at that time, there will be no other temples in France than the temples of reason.' 'By my truth,' said Chamfort, with a sarcastic smile, '*you* will not be one of the priests of those temples.' 'I do not hope it; but you, Monsieur de Chamfort, who will be one, and most worthy to be so, you will open your veins with twenty-two cuts of a razor, and yet you will not die till some months afterward.' They looked at each other, and laughed again. 'You, Monsieur Vicq d'Azir, you will not open your own veins, but you will cause yourself to be bled six times in one day, during a paroxysm of the gout, in order to make more sure of your end, and you will die in the night. You, Monsieur de Nicolai, you will die upon the scaffold; you, Monsieur Bailly on the scaffold; you, Monsieur de Malesherbes, on the scaffold.' 'Ah

God be thanked,' exclaimed Roucher, 'it seems that Monsieur has no eye but for the *Academy;* of it he has just made a terrible execution, and , thank heaven . . . . . .' 'You! you also will die upon the scaffold.' Oh, what an admirable guesser,' was uttered on all sides; 'he has sworn to exterminate us all.' 'No, it is not I who have sworn it.' 'But shall we, then, be conquered by the Turks or the Tartars? Yet again . . .' 'Not at all; I have already told you, you will then be governed only by philosophy—only by reason. They who will thus treat you will be all philosophers—will always have upon their lips the self-same phrases which you have been putting forth for the last hour—will repeat all your maxims—and will quote, as you have done, the verses of Diderot, and from La Pucelle.' They then whispered among themselves: 'You see that he is gone mad;' for he preserved, all this time, the most serious and solemn manner. 'Do you not see that he is joking, and you know that, in the character of his jokes, there is always much of the marvellous.' 'Yes,' replied Chamfort, 'but his marvellousness is not cheerful; it savors too much of the gibbet; and when will all this happen?' 'Six years will not pass over, before all that I have said to you shall be accomplished.'

"'Here are some astonishing miracles (and, this time, it was I myself who spoke), but you have not included me in your list.' 'But you will be there, as an equally extraordinary miracle; you will then be a Christian.'

"Vehement exclamations on all sides. 'Ah,' replied Chamfort, 'I am comforted; if *we* shall perish only when La Harpe shall be a Christian, we are immortal.'

"'As for that,' then observed Madame la Duchesse de Grammont, 'we women, we are happy to be counted for nothing in these revolutions: when I say for nothing, it is not that we do not always mix ourselves up with them a little; but it is a received maxim that they take no notice of us, and of our sex.' 'Your sex, ladies, will not protect you this time; and you had far better meddle with nothing, for you will be treated entirely as men, without any difference whatever.' 'But what, then, are you really telling us of, Monsieur Cazotte? You are preaching to us the end of the world.' 'I know nothing on this subject; but what I do know is, that you, Madame la Duchesse, will be conducted to the scaffold, you and many other ladies with you, in the cart of the executioner, and with your hands tied behind your backs.' 'Ah! I hope that, in that case, I shall at least have a carriage hung in black.' 'No, madame; higher ladies than yourself will go, *like you,* in the common car, with their hands tied behind them.' 'Higher ladies! what! the princesses of the blood?' 'Still more exalted personages.' Here a sensible emotion pervaded the whole company, and the countenance of the host was dark and lowering; they began to feel that the joke was become too serious

"Madame de Grammont, in order to dissipate the cloud, took no notice of the reply, and contented herself with saying in a careless tone: '*You see that he will not leave me even a confessor.*' 'No, madame, you will not have one—neither you, nor any one besides. The last victim to whom this favor will be afforded will be . . . . .' He stopped for a moment. 'Well! who then will be the happy mortal to whom this prerogative will be given?' ''Tis the only one which he will have then retained—and that will be the king of France.'

"The master of the house rose hastily, and every one with him. He walked up to M. Cazotte, and addressed him with a tone of deep emotion: 'My dear Monsieur Cazotte, this mournful joke has lasted long enough. You carry it too far—even so far as to derogate from the society in which you are, and from your own character.' Cazotte answered not a word, and was preparing to leave, when Madame de Grammont, who always sought to dissipate serious thought, and to restore the lost gayety of the party, approached him, saying: 'Monsieur the prophet, who has foretold us of our good fortune, you have told us nothing of your own.' He remained silent for some time, with downcast eyes. 'Madame, have you ever read the siege of Jerusalem in Josephus?' 'Yes! who has not read that! But answer as if I had never read it.' 'Well then, madame, during the siege, a man, for seven days in succession, went round the ramparts of the city, in sight of the besiegers and besieged, crying unceasingly, with an ominous and thundering voice: *Wo to Jerusalem!*—and the seventh time he cried: *Wo to Jerusalem—wo to myself!* And at that moment an enormous stone projected from one of the machines of the besieging army, and struck him and destroyed him.'"

Joan of Arc's case will appropriately follow that of Cazotte; it is also a matter of history, and may be relied on without the slightest hesitation. Like Socrates, she openly professed herself under the guidance of a familiar genius, whom she called St. Michael. She at length fell into the power of the English, by whom she was (as might be expected from the ignorance of the age), regarded as a witch; they tried her as a heretic and sorceress by an ecclesiastical tribunal, and after condemnation, burnt her at Rouen. I will take the account from Newnham:

"On the 12th of February, 1428, on which the disastrous battle of Rouvray-Saint-Denis was fought, Joan said to M. Robert de Baudricourt

Governor of Vaucouleurs, that the king had suffered great losses before Orleans, and would experience further losses unless she were sent to him. The exactitude of this announcement determined Baudricourt to send her.

"The next day, on her departure, many persons asked Joan how she could possibly undertake this journey, since the whole country was overrun with soldiers; she answered that she should find the way clear. No accident happened to her, nor to those who accompanied her, and even very few difficulties during the whole journey, which lasted eleven days, through an enemy's country, at the close of winter, over a distance of one hundred and fifty leagues, and intersected by several deep rivers.

"On the 27th of February, when she was about to be presented to the king, a man on horseback, who saw her passing, employed some blasphemous expressions. Joan heard him, and, turning her head, said, 'Ha, dost thou blaspheme the name of God, and yet so near to death?' In about an hour afterwards, this man fell into the water and was drowned.

"The following month, Joan informed the doctors, who were commissioned to examine her at Poictiers,—

"1. That the English would be beaten; that they would raise the seige of Orleans; and that this city would be delivered from the said English;

"2. That the king would be consecrated at Rheims;

"3. That the city of Paris would be restored to its loyalty;

"4. That the Duke of Orleans would return from England.

"The king, in council, having determined to send Joan to Orleans, they commissioned her to conduct a convoy of provisions, of which the place stood in the greatest need." "It was observed to her, that it would be a difficult enterprise, considering its fortifications, and the English besiegers, who were strong and powerful. 'By the help of my God,' answered she, 'we will put them into Orleans easily, and without any attempt to prevent us on the part of the English.'"

"The generals of Charles VII., not daring to take the route which Joan of Arc pointed out to them, the convoy was obliged to halt at some leagues from Orleans, from the want of water, and from adverse winds. Everybody was confounded and in grief; but Joan announced that the wind would soon change, and that the provisions would be easily thrown into the town, in spite of the English; all which was completely verified.

"The English retained one of the heralds whom Joan had sent to summon them to surrender;—they even wished to burn him alive;—and they wrote to the university of Paris to consult upon the subject: Joan assured them, that they would do him no harm.

"When Joan appeared on the redoubt called the boulevard de la Belle-Croix, to summon them to raise the siege, these loaded her with abuse, especially one of the officers, to whom Joan replied, that 'he spoke falsely, and in spite of them all, they would soon depart; but *that he* *would never see it,* and that many of his people would be killed. In fact when the fort of Tournelles was taken this officer wished to make his escape by the bridge which separated the fort from the suburbs; but an arch gave way beneath his feet, and he, with all his men, were drowned.

"Having introduced the convoy of provisions and ammunition into Orleans, Joan foretold to the inhabitants, that in five days not an English man would remain before their walls.

"On the 6th of May, Joan informed her confessor, that on the next day she should be wounded above the bosom, while before the fort at the end of the bridge. And in fact she received a lance between the neck and the shoulder, which passed out nearly half a foot behind the neck.

"On the morning of the 7th, her host having invited her to partake of some fish which had been brought him, she desired him to keep it till night, because she would then bring him a stranger who would do his part in eating it. She added, that after having taking the Tournelles, she would repass the bridge—a promise which seemed impossible to any body; but which nevertheless was fulfilled, like all the other impossibilities.

"The irresolution of the king was the greatest punishment to Joan:—'I shall only continue for a year, and a very little more,' said she; 'I must try to employ that year well.'

"The Duchesse d'Alençon was greatly alarmed, on seeing her husband at the head of the army, which was about to enforce the coronation of the king, at Rheims. Joan told her to fear nothing—that she would bring him back safe and sound, and in a better condition than he was at that moment.

"At the attack of Jargean, the Duc d'Alençon was attentively reconnoitering the outworks of the town, when Joan told him to remove from the spot on which he was standing, or that he would be killed by some warlike missile. The duke removed, and almost immediately afterwards, a gentleman of Anjou, by the name of M. de Lade, was struck in the very place which the duke had just left.

"The English generals, Talbot, Searles, and Falstaff, having arrived, with four thousand men, to the relief of the Castle of Beaugenie, in order to raise the siege of that place, Joan predicted that the English would not defend themselves—would be conquered, and that this triumph would be almost bloodless on the part of the royal army; and that there would be *very few*—not quite to say *no one*—killed of the French combatants. In truth, they lost but *one man,* and almost all the English were killed or taken.

"Joan had told the king not to fear any want of troops for the expedition to Rheims, for that there would be plenty of persons, and many would follow him; in truth, the army increased visibly from day to day and numbered twelve thousand men by the end of June, 1429.

'When the army had arrived before Troyes, that city shut its gates, and refused to yield. After five days waiting, and useless efforts of capitulation, the majority of the council advised to return to Gien; but Joan declared that in less than three days she would introduce the king into the city, by favor or by force. The chancellor said that they would even wait six days, if they could be sure of the truth of her promises. 'Doubt nothing,' said she—'you will be master of the city *to-morrow.*' Immediately preparations were made for the projected assault, which so alarmed the inhabitants and their garrison, that they capitulated next day.

"Charles feared that the city of Rheims would oppose a long resistance to his arms, and that it would be difficult to make himself master of it, because he was deficient in artillery. 'Have no doubt,' said Joan, 'for the citizens of the town of Rheims will anticipate you. Before you are close to the city, the inhabitants will surrender.' On the 16th of July, the principal inhabitants of the city laid its keys at the feet of the king.

"During her captivity, Joan made the following predictions, on the first of March, 1430, in the presence of fifty-nine witnesses, whose names are given faithfully by M. le Brun de Charmettes:—'Before seven years are past, the English will abandon a larger prize than they have done before Orleans, and will lose everything in France. They will experience the severest loss they have ever felt in France; and this will be by a great victory which God will bestow upon the French.'

"Paris was actually retaken by the French, under the command of the Marshal de Richemont, and the Count de Dunois, on the 14th of April, 1436.

"As to the great victory which should prove so fatal to the English, M. le Brun thinks may be understood either the battle of Tormigny, gained by the French in 1450, and which resulted in the conquest of Normandy, or the battle of Castillon, fought in 1452, in which the renowned Gen. Talbot perished, and which completed the submission of la Guienne to France.

"In order to explain the expression, *will lose everything in France*, the same author recalls the fact, that the people in general restricted the term France to what had originally composed the immediate dominion of Hugo Capet and his successors, as l'Isle de France, l'Orléannais, le Berri, la Touraine, etc. Thus Joan of Arc, born at Domremy, at the extremity of la Champagne, said that St. Michael had ordered her to go into France.'

LADY. I have been reading a somewhat similar account, belonging, I presume, to the same class, in the "Use of the Body in Relation to the Mind," by Moore; he says:

"There is another form of supersensuous vision, for the existence of which we can scarcely discover sufficient reason unless to intimate as undeveloped faculty, which, in another state, may be proper to man. The nature and character of this strange endowment will be best expressed in the language of one who believed himself to be possessed of it. Heinrich Zschokke, a man remarkable for the extent of his honorable labors as a statesman and an author, solemnly writes the following passage in his autobiography: 'It has happened to me sometimes, on my first meeting with strangers, as I silently listened to their discourse, that their former life, with many trifling circumstances therewith connected, or frequently some particular scene in that life, has passed quite involuntarily, and, as it were, dream-like, yet perfectly distinct, before me. During this time I usually feel so entirely absorbed in the contemplation of the stranger's life, that at last I no longer see clearly the face of the unknown wherein I undesignedly read, nor distinctly hear the voices of the speakers, which before served in some measure as a commentary on the text of their features. For a long time I held such visions as delusions of the fancy, and the more so as they showed me even the dress and emotions of the actors, rooms, furniture, and other accessories.' He was at length astonished to find his dream-pictures invariably confirmed as realities, and he relates this instance as an example of his visionary gift: 'One day, in the city of Waldshut, I entered an inn (the Vine) in company with two young students. We supped with a numerous company at the table d'hote, where the guests were making very merry with the peculiarities of the Swiss, with Mesmer's magnetism, Lavater's physiognomy, etc One of my companions, whose national pride was wounded by their mockery, begged me to make some reply, particularly to a handsome young man who sat opposite to us, and who had allowed himself extraordinary license. This man's life was at that moment presented to my mind. I turned to him, and asked whether he would answer me candidly if I related to him some of the most secret passages of his life, I knowing as little of him personally as he did of me. He promised, if I were correct, to admit it frankly. I then related what my vision had shown me, and the whole company were made acquainted with the private history of the young merchant—his school years, his youthful errors, and, lastly, with a fault committed in reference to the strong-box of his principal. I described the uninhabited room with whitened walls, where, to the right of the brown door, on a table, stood a black money-box, etc. A dead silence prevailed during the whole narrative, which I alone occasionally interrupted by inquiring whether I spoke the truth. The startled young man confirmed every particular, and even, what I had scarcely expected, the last mentioned. Touched by his candor, I shook hands with him, and said no more. He is, probably, still living."

CONVERSATION IX.

SOMNAMBULISM.

Lady. I have been reading Dendy's Philosophy of Mystery, and have marked a number of cases which seem to bear much resemblance to some of the stages of fascination.

He says that somnambulism is the most perfect paradox among the phenomena of sleep, as it exhibits actions without a consciousness of them; indeed so complete is suspension of sensibility that contact, nay, intense inflictions, do not produce that mental consciousness which is calculated to excite alarm or even attention.

He says that in London, 1833, a man was brought before Alderman Thorp, who had a parcel *cut from his arm*, although he had strapped it tightly on to prevent this, as he was often falling asleep during his walk. Yet, even then, he usually took the parcels to the proper directions.

The crew of a revenue boat, on the coast of Ireland, about two o'clock in the morning, picked up a man swimming in the water. He had, it appeared, left his house about twelve, and walked two miles over a most dangerous path, and had swam about one mile. After he was taken into the boat he could not be persuaded that he was not still in his warm bed at home.

In 1834, Marie Pan was admitted into the hospital at Bordeaux, France; her left arm and hand covered with deep and bleeding gashes, its tendons projecting, and the bones broken. She had, in her sleep, gone into a loft to cut wood with a hedging bill; thinking she was cutting the wood, she had hacked her forearm and hand until she fainted away and fell, bathed in her own blood. She *had felt no pain*, but merely a sensation, as if the parts were pricked with pins.

In 1832 some fishermen near Brest, in France, were surprised at finding, at two o'clock in the morning, a boy about twelve years old, up to his waist in the sea, fishing for flounders, of which he drew up five or six. Their surprise, however, was increased to wonder when, on approaching him, they found he was *fast asleep*. He was taken home and put to bed, but was immediately afterward attacked with a raging fever.

In 18—, says the Augsburg Gazette, Dresden was the scene of a melancholy spectacle. As early as seven in the morning a female was seen walking on the roof of one of the loftiest houses in this city, apparently occupied in preparing some ornaments as a Christmas present. The house stood as it were alone, being much higher than those adjoining it, and to draw her from her perilous situation was impossible. Thousands of spectators had assembled in the streets. It was discovered to be a handsome girl, nineteen years of age, the daughter of a master baker, possessing a small independence, bequeathed to her by her mother. She continued her terrific promenade for hours, at times sitting on the parapet and dressing her hair. The police came to the spot, and various means of preservation were resorted to. In a few minutes the street was thickly strewn with straw, and beds were called for from the house, but the heartless father, influenced by the girl's step-mother, refused them. Nets were suspended from the balcony of the first floor, and the neighbors fastened sheets to their windows. All this time the poor girl was walking in perfect unconsciousness, sometimes gazing at the sky, and at others singing or talking to herself. Some persons succeeded in getting on the roof, but dared not approach her for fear of the consequences if they awoke her. Towards eleven o'clock she approached the very verge of the parapet, leaned forward and gazed upon the multitude beneath; every one felt that the moment of the catastrophe had arrived. She rose up, however, and returned calmly to the window by which she had got out. When she saw there were lights in the room, she uttered a piercing shriek, which was re-echoed by thousands below, and fell dead into the street.

Doctor. You have extracted all that is worth noticing in the Philosophy of Mystery; for a man is certainly unfit to treat on physiology who believes, like Dendy, that electricity is the source of life, and who, driven to *confess the fact of the existence of several cases of apathetic trance produced by fascination,* which he quotes, says, "It is, I believe, quite true, that they were unconscious of the operation; but even this is not *safe. Pain is given us as warning against extreme injury, that by our complaint or suffering, the surgeon's mind may be on its guard.*"

Newnham says that the phenomena of somnambulism *are established and recognized* by the antagonists of fascination. And that in fact the knowledge of somnambulism rescues many of these natural phenomena from the alledged dominion of sorcery and of the black-art, under which they have been classed by the ignorant and the short-sighted, and restores them to their proper position as the *natural effects of natural causes.*

Dendy, continually rushing into dilemmas from which he cannot extricate himself without overthrowing his former positions, remarks, "That whatever may be the influence imparted by *tractions*, the phenomena of *excited* somnambulism are similar or precisely to those *spontaneously* occurring." "In a word, mesmerism is true in part: it *may* induce catalepsy, somnambulism, exalted sensation, apathetic sensibility, suspended circulation, even death. Clairvoyance and prophecy *alone* are the impositions as regards its effects," etc.

In both cases the parties remember nothing whatever of the recurrences experienced in sleep-waking. The actions of many natural sleep-wakers explain the origin of many stories of pixey and fairy, who would enter, in some cases, the houses of their friends at night, and do up all their work for them, and in others cause much trouble, to whom they bore ill-will, by breaking their crockery, overturning chairs, etc. A tailor in this city, who worked for a shop which furnished suits made to order at twenty-four hours notice, had taken a coat to finish by the next morning, under the expectation of his wife assisting him. Arrived at home, his wife was ill, and unable to do anything to help him beyond sewing the sleeves. He worked steadily at his task during the day, but so much did his unusual efforts exhaust him, that despite himself he went to bed with a heavy heart, for he dreaded, with good reason, the loss of his situation from the disappointment of his employers. When roused at an early hour the next morning, he hastily prepared to resume his work, when, to his utter astonishment, he found the coat perfectly finished, and done too, he confessed, in a much better manner than it was possible for him to do it. Immediately perceiving that it was the deed of his guardian angel, he fell on his knees and gave thanks. He told me that it was the only way in which the coat could have been made; for, on account of his exertions the preceding day, he was utterly incapable of working, *and the next morning could do little more than stand.* He had evidently risen in the night and finished the coat himself, and must have done this in complete darkness, for a light would have, in all probability, (owing to a peculiar state,) awakened his wife, and they had but one room.

Marcus, the freedman of Pliny, dreamed that a barber, sitting on his bed, had shaved him, and awoke well trimmed; Marcus had unconsciously shaved himself. Dendy mentions that early one morning, at a farm-house in Sussex, England, an immense number of foot-prints were observed by the men about a gate, which were not there over night. On their return the servant girl was relating her *dream;* that she was told the cows had got into a wrong field, and that she had gone out, opened the gate, and driven them back. She had been observed by one of the family *performing* her dream. A young gentleman at Brenstein was seen to rise, get out of his window on the roof, and take a brood of young magpies from their nest, and wrap them in his cloak. He then returned quietly to his bed, and in the morning *related his dream* to his two brothers. They had slept with him and witnessed this feat, of which he would not be persuaded until they showed him the birds in his cloak.

Dr. Gall relates a case of a Mr. Roggenback, who informed him, in the presence of many persons, that he had been a somnambulist from infancy. In this state his tutor had made him read, look for places on the map, (and which he found more readily than awake,) and perform many other actions, all of which he performed more readily than in his waking moments. All this time his eyes would be open and fixed; he did not move them in the least, but would turn his head to vary their direction.

A story is credited to Professor Upham of Bowdoin College, relating to a farmer who rose in his sleep, went to his barn, and thrashed out five bushels of rye *in the dark*, separating the grain from the straw with great exactness. Captain Brown, of Portland, Me., while at sea, became very ill and confined to his berth. Those on board noticed a peculiar stiffness and rigidity of his limbs. Though encompassed by timber, and unable to go on deck, he saw distinctly all that passed around him; describing many vessels that passed his own, together with several at a great distance, at anchor; and told all that took place on board of them. His descriptions were confirmed in every instance where it was possible to make inquiry.

The letter of Mr. John Wise, of Lancaster, Pa., will aptly conclude our cases of natural somnambulism:—

"From the age of ten to fifteen, it was almost a nightly habit with me to get up from my bed and travel through the whole house, unbarring the doors and walking through the different apartments with the greatest ease in utter darkness, sometimes unlocking the back door, and travelling into the yard and out-houses, stopping at different places, and examining, apparently with the nicest precision, such articles as happened to fall in my way.

"Yet after being awakened, not the slightest recollection remained of what had happened. During some of these nocturnal excursions, I opened a dormar window, and crawled out thence to the very apex of the roof? On one of these occasions, after getting on the top of the house, I was awakened by a slight shower of rain, and it was with difficulty I made a safe descent by way of the next neighbor's house, which obliged me to rouse the family in order to get back to my bed again.

"The most singular feat, however, that I performed in the somnambulic state, was a situation that I got into, out of which I could not extricate myself again in a waking state, neither could I, upon trial, without the assistance of something to step on first, get into it again. The room in which I slept at this time, had in it an old-fashioned cradle of double length, made for twin babes. This was placed upon a long narrow keg, which stood on its ends, so that when standing alongside of it, the sides of the cradle came within two inches of my chin, and it was so poised, that a slight preponderance either way would capsize it. During one of my nocturnal perambulations in the middle of the night, by some means I got into this cradle, without the assistance of anything that would enable me to step up, save some strange inexplicable cause. It was a cold winter night, and I became awakened while in the act of pulling books from around me, which were in the cradle at the time. After being perfectly awakened, it required a great deal of caution to support my centre of gravity, until I had called the assistance of some of the family to enable me to get down.

"In the somnambulic state, I am told my eyes are wide open, and have a glassy appearance. Although I would answer questions, and talk freely on subjects that were indicated by my conduct, yet it was next to impossible to awaken me by any other process than the application of cold water. After a more advanced age, these symptoms have taken a different form, my nightly perambulations being confined to my chamber, and they are more particularly connected with the organs of hearing and vision. It does appear, that, like the inner vision without the aid of the external eye, there is also a distinct faculty of hearing, independent of the external ear. This has been experienced by persons of my acquaintance. I have frequently hastened to the place from whence sounds appeared to come. Generally it appears to be the calling of my name, by persons whose voice I can recognize; but the most frequent delusions are through the eye. These symptoms, from their frequency, although not fearful in themselves, have been of late a source of annoyance, and they always occur in a half-waking condition. The clearer and smoother the chamber in which I sleep, the less am I annoyed with these delusions. Of these symptoms and their operations, I have a tolerable distinct recollection afterwards. I generally find myself sitting up in bed, in the act of getting up and moving towards the objects, which mostly appear to be human beings, and often persons of my acquaintance. Although this happens to me in a half-waking condition, still, I possess the faculty of reasoning within myself upon the necessity of not minding these delusions, but seldom become perfectly satisfied until I get up and try to touch the object but invariably get awake on being touched by another person.

After being awakened, it has often appeared to me that a conflict had been going on between the material and spiritual functions."

Lady. Is somnambulism ever induced by disease?

Doctor. There have been a great number of cases recorded by the medical profession, in which illness developed the faculty, and when restored to health it would be lost. Many of these cases present all the phenomena of induced prevision, clairvoyance, etc.; and, what will seem a strange fact regarding the matter, none ever think of doubting them, not even the most bitter opponents of fascination; yet speak of them in connection with fascination, and you will but excite their anger.

We find a case published by two French gentlemen of this character. The patient predicted a detail of the principal events that should happen to her in the course of the following years,—of the maladies to which she would be subjected,—of the remedies which would be necessary,—of the effect of these remedies,—of the crisis which she would experience,—and of the precise period of her cure; all of which were substantially correct and accomplished.

Lady. Do medicines ever produce symptoms similar to these?

Doctor. Quite a large number of cases produced by medicinal substance, are also recorded; the cases vary from those of intense mental exaltation and development of the intellectual powers, to catalepsy and trance.

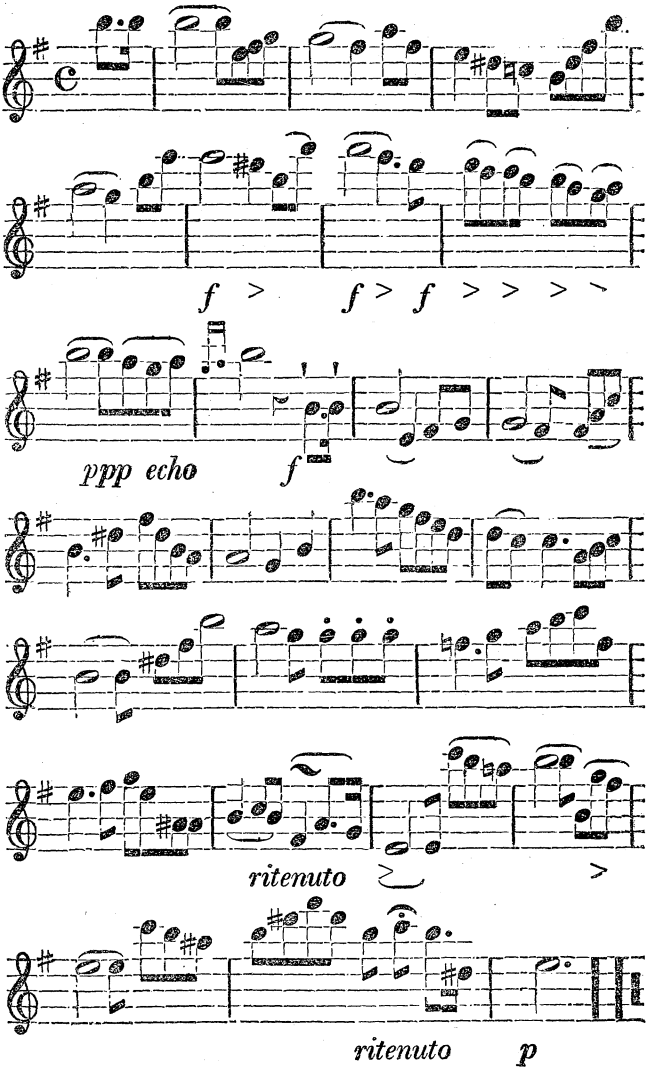
Dr. O'Shaughnessy, describing the effects of Indian hemp, tells us that in a lad of excellent habits, ten drops of the tincture induced the most amusing effects. A shout of laughter ushered in the symptoms, and a *transition state of cataleptic rigidity*, occurred for two or three minutes. He enacted the part of a rajah giving orders to his courtiers; he could recognize none of his fellow-students or acquaintances; all to his mind seemed as altered as his own condition; he spoke of many years having passed since his student days; described his teachers and friends with a piquancy a dramatist would envy; detailed the adventures of an imaginary series of years, his travels and his attainments of wealth and power; he entered on discussions of religious, scientific, and political topics with astonishing eloquence, and disclosed an extent of knowledge, reading, and a ready apposite wit, which those who knew him best were altogether unprepared for. For three hours and upwards he maintained the character he at first assumed, and with a degree of ease and dignity perfectly becoming his high assumption.

Similar facts were known in ancient times. The Thracians used to intoxicate themselves by casting the seeds of certain poisonous plants into a fire made for the purpose, around which they sat and inspired the narcotic fumes. Moore says that there can be no doubt that the incantations of witchcraft and magic were generally attended with the practice of burning herbs of a similar kind. *The ancients deemed certain temperaments essential to the reception of the divine efflatus*, and the melancholic was considered the most suitable, especially when aggravated by rigid abstinence and the use of narcotics, (this exactly suits Swedenborg, etc.) Pliny informs us that the soothsayers were accustomed to chew roots supposed to be of a certain species of henbane. The Hindoos employ the Indian hemp for the same purpose; and in St. Domingo the supposed prophets chew a plant called cohaba, that they may be the better able to look into the unseen world and perceive the shadows of coming events. Sophocles called the priestesses of Delphos laurel eaters, because they were in the habit of chewing the leaves of that shrub before they mounted the tripod, etc., etc.

Townshend tells us of a sleep-waker who played beautifully on the flute, and was accustomed to improvise upon that instrument with all the musical genius he possessed; but the charming strain, once uttered, was lost forever. One day, in sleep-waking, being asked to write down a composition, he instantly seized music paper and a pen, and wrote down the air you observe on this paper. I need not mention that he was utterly incapable of such a display of talents in the waking state.

MUSIC

POUR LA FLUTE.



The following case of diseased somnambulism is taken from Mr. Sandby. It is related with singular truthfulness and accuracy.

"It is perfectly true, that our poor friend who has now been some months with us, presents one of those singular and almost incredible cases of hysterical or nervous affection, which are at distant intervals, witnessed under the dispensation of the Almighty.

"The overthrow of the regular functions of the nervous system, was occasioned by the almost sudden death of her father, to whom she was most fondly attached, who was seized with illness, during her absence from him, and died in a few hours after she returned to her home. I cannot enter into any longer details of the case, which has been attended with all those varieties, which have long characterized the complaint, among medical men as the Protean disorder. The extraordinary powers communicated to the *other senses by the temporary suspension of one or two of them, are beyond credibility to all those who do not witness it;* and I really seldom enter into any of the details, because it would be but reasonable, that those who have *not seen,* should doubt the reality of them. All colors she can distinguish with the greatest correctness by night or by day, whether presented to her on cloth, silk, muslin, wax, or even glass—and this I may safely say, as easily on *any part of the body as with the hands,* although, of course, the ordinary routine of such an exhibition of power, takes place with the hands,—the other being that of mere curiosity. Her delicacy of mind, and high tone of religious feeling, are such, that she has the greatest objection to make that which she regards in the light of a heavy affliction from God a matter of show or curiosity to others, although to ourselves, of course, all these unusual extravagances of nervous sensibility, are manifest, for at least twelve out of every twenty-four hours. She can not only *read with the greatest rapidity* any writing that is legible to us, music, etc., with the mere *passing of her fingers over it,* whether in a dark or light room, (for her *sight* is for the most part suspended, when under the influence of the attack, or paroxysm, although she is perfectly *sensible,*—nay, more *acute* and *clever* than in her natural state,) but within this month past, she has been able to collect the contents of any printing or MS., by merely laying her hand on the page, without *tracing* the lines or letters;—and I saw her last night only, *declare the contents of a note just brought into the room,* in this way, (when I could not decipher it myself without a candle,) and with a rapidity with which I could not have read it by daylight. I have seen her develop hand-writing by the application of a note to the back of her *hand, neck,* or *foot;* and she *can do* it at any time. There is nothing UNNATURAL in this, for of course the nervous susceptibility extends all over the surface of the body, but use and habit cause us to limit its power more to the fingers. Many, even medical men, take upon themselves to declare, that *we* are all (her medical attendants as well) under a mere delusion. We ask none to believe anything, if they prefer not to do so, and only reply—The case is equally marvellous either way;—either that this our poor patient should be thus afflicted, or that eighteen or nineteen persons of my family and friends, in the daily habit of seeing her, should fancy she is for every twelve hours out of the tweny-four, doing at intervals, that which she is *not* doing. There are many exhibitions of extravagant powers which she possesses, *that we talk of to no one;* for finding it difficult to acquire credit for lesser things, we do not venture on the greater. *Her power ceases the moment the attack passes off.* A considerable swelling has at times been visible at the back of the head, which has yielded to the treatment.

"It is certainly a case which would be an instructive one, in the consideration of the physiology of the human frame: but she, poor thing! is most averse to experiments being purposely made on her;—but in her *every day life* among us, we have no lack of proof for all we believe and *know.*

"Between the attacks, she is as perfectly in a *natural state*, as ever she was in her life. There is but one *paradox* in her state; and that is, that she can at such times, hear *some* sounds and not *others*, though very much louder,—and see *some* things, and not *others*, though placed before her. She could hear a *tune whistled*, when she could not hear a gun fired close to her. It is certainly the absorption or absence of mind that occasions this; *absent* to some things, though *present* to *others*, like *any* absent man; and thus Dr. Y—— accounts for it."

CONVERSATION X.

HISTORY OF FASCINATION.

Doctor. We have now reviewed, with a rapid glance, the six stages, curative effects, and natural conditions, simulating the phenomena of fascination. To complete our plan, I have compiled a brief history of the matter, which, with your permission. I will read.

Lady. I am anxious to hear it. It certainly appears strange to me that the matter should have been forgotten through the middle ages, and, until very lately, remain unknown.

Doctor. That it was known and practised is an undoubted fact, but it was, after the Christian era, confined to convents; and many a miracle at the tombs and other depositories of the relics of saints, may safely be referred to this agency of fascination. In some instances, the Esculapean visions, prescriptions, etc., were repeated. St. Gregory, bishop of Tours, tells of the efficacy of pilgrimages to the tombs of saints. Says he: "Any person filled with faith, coming near the tombs and praying, will be speedily cured of whatever illness may befall them. Some affirm that the saints appear to them in the night (of course while sleeping on or near the tomb), during their dreams, and reveal the proper remedies." For any number of similar instances, see accounts of St. Martin, Protegeno, Moses of Lysbia, Julianus of Edessa, St. Litard, St. Fortunatus, etc., etc.

Leger quotes George Fabricius, who, in his Commen tary on Poets, 1720, p. 73, says that he saw, in Padua, country people who were going to the church of St. Anthony for the purpose of obtaining salutary visions during their sleep. "This," says Fabricius, "exactly resembles the ancient pagan worship. And in truth, even at the present day, the churches of saints are resorted to, to receive the same kind of revelations for curing disease."

The king of France, from the time of Clovis, was the royal fascinator of his day. Laurent tells us that one of the officers of Clovis was afflicted with scrofula; the king felt much concern for him, as the resources of medicine had been tried in vain. He dreamed, one night, that if he touched the officer's neck, it would become well; he arose in the morning and did so; from that time the power remained in his family.

Marino Cavalli, ambassador from Venice to France in 1546, thus describes the operation of touching for the scrofula. After giving a description of the reigning monarch, Francis, he says: "Like all the monarchs of France, he has received from heaven the singular gift of curing the evil. Even Spaniards flock hither to profit by this miraculous property. The ceremony takes place some solemn day, like Easter, or Christmas, or the festivals of the Virgin; the king first confesses and receives the sacrament, then makes the sign of the cross on the sick, saying: 'The king touches, may God cure thee!' If the sick were not restored, they would not, doubtless, flock hither so far; and since the number augments always, we must believe that God takes this method to deliver the infirm, and to increase, at the same time, the dignity of the crown of France." The power, however, it seems only remained with them while virtuous; for the abbot of Nogent tells us that Philip the First, who at first possessed the gift when he ascended the throne in 1060, lost it by indulgence in vice.

Many other monarchs, determined not to be outdone, assumed the same power, not curing scrofula alone, but all other diseases; in one instance it was of singular benefit to one of the "Lord's anointed." James, the exiled king of England, engaged himself as a *toucher* for scrofula in the public hospitals of France. Fascination was also useful, in some cases, to the royal operators themselves: Tytler, speaking of Charles VI., tells us that "he once narrowly escaped being burned to death, and in consequence was seized with a dreadful fit of frenzy. To relieve him, they sent for a *magician* from Montpellier, and he became *somewhat better*."

We are told by Beniveni, a Florentine physician, that he had a young man under his care, who was wounded in the chest by an arrow, which surgical skill could not extract. After a time of great pain, this faculty of prevision became developed, and he told the day and hour when the arrow-head should issue from the wound, and the time of his perfect cure; said he would go to Rome, die there, etc., with many other strange particulars, all of which, to the astonishment of the narrator, happened exactly as he had predicted them.

In the eighty-fourth page of the Life of the Queen of Navarre, it tells, while lying at Metz, at the point of death, in consequence of a severe fever, she described the battle of Jarnac in every minute particular; told the victory of her son; his falling to the ground, death of the prince of Condé, and flight of the enemy; and the information was confirmed the next night, to the astonishment of her attendants, who had thought her delirious while giving it.

Van Helmont tells us, that "there exists in man a certain energy which can act beyond his person, according to his will or imagination, and impart virtues, and exercise a durable influence, even on distant objects"

Cardanus at Naples, in 1501, performed extraordinary cures by fascination. He declared that nature had endowed him with strange faculties. He could go into sleep, waking at will, and in that state cure himself of an occasional attack of the gout, prescribe remedies, see at a distance, and correctly predict future events. For all these faculties he was imprisoned, as a sorcerer, at Bologna.

A volume might easily be filled with facts similar to the above. But it is unnecessary to recite them all; when once attention is awakened to the subject, enough can be found in our every-day reading and observation. Suffice it to say, that there is an uninterrupted chain of evidence from the earliest times to the present. I shall briefly, then, recount a few of the most remarkable, which I will mainly extract from Dr. C. R. Hall, a bitter opponent of fascination, but who, despite himself, gives such evidence in its favor—even his own experience proving it—that the perusal of his book, "The Rise, Progress, Mysteries," etc., etc., will convince any person of the reality of the subject he tries to injure, and also of his own silliness in endeavoring to make ridicule a test of truth.

In the seventeenth century there appeared in England a gardener, Levret, an Irish gentleman, Valentine Greatraks, and a Dr. Streper; and in Italy, Francisco Bagnone, etc., all of whom possessed the power of curing diseases by touching or striking with the hand. The most celebrated of these, Greatraks is represented by the Lord Bishop of Derry, as being a simple, unpretending man, and sincerely pious. The same authority informs us, that not only had he *seen*, among other cures, "dimness cleared and deafness cured by his touch, etc., etc.; running sores of the king's evil dried up; and kernels brought to a suppuration by his hand· grievous sores, of many months' date, in a few days healed; obstructions and stoppages removed;" but "even cancerous knots in the breast dissolved."

Gassner, in 1770, excited much attention in Germany and performed several miraculous cures. In 1794, a Count Thun appeared at Leipsic, professing to cure gout, palsy, and other complaints, by the imposition of his hands; he was of a weak constitution, and his success would vary.

Mesmer was born in 1734. He was a severe student, and soon became a proficient and able physician. It has been truly observed that from time immemorial the mineral magnet was employed as a remedy in the cure of burns, and other injuries, but it was not until the sixteenth century, when alchemy was in its zenith, that its use as a remedy for internal diseases became general. At this time there was the earliest speculations on the extensive diffusion of the magnetic principle, which, as in our own day, was made to explain the motions of the planets and the laws of life.

Mesmer fell into the universal error, and commenced treating the sick by means of magnetized rods, which he obtained from Father Hell or Holl, a Jesuit, professor of Astronomy at Vienna. His great success astonished himself, and very much chagrined the professor the consequence of which was an irreconcilable quarrel between the two. The acuteness of Mesmer soon led him to perceive that he might dispense with the rods, and that he could produce the same effects by merely drawing his own hands from above downwards in front of his patient.

His success in fascination was wonderful; for a great number of years nothing like it had been seen in Europe, and the fame of Mesmer spread rapidly. He left Vienna, and travelled through various towns and cities in Europe, met with considerable encouragement, finally returned, and then left for Paris, where we find him established in 1778. D'Eslon, one of the court physicians, was his first convert; others soon followed, and the majority of the Parisians declared in his favor He finally surmounted the enmity of all his opponents and retired with a large fortune, the result of his benevolent exertions, after founding a school of pupils, nearly all of whom became celebrated. The facts in his experiments were allowed by the French Academy of Medicine, but the idea of a fluid denied.

The Marquis de Puseygar, one of Mesmer's pupils, having, in March, 1784, fascinated his gardener, found that his patient was capable of holding a conversation while wrapped in induced somnambulism. He found, moreover, that the patient not only understood the words, but even the unexpressed thoughts of his master, and would answer with equal clearness the intended question while it was yet a mere suggestion of the mind, as after it had been conveyed to him in language This was the origin (wrongly so called) of induced somnambulism.

In 1778 Perkins, an American surgeon practising in

London, invented and obtained a patent for his "metallic tractors." The tractors were merely small pieces of steel, strongly magnetized, (nothing more than a different form of the magnetized rod.) They were applied over the affected part, and gently moved about, touching the skin. Gout, rheumatism, toothache, and palsy, were a few of the diseases cured by the tractors, etc. Among those who publicly vouched for the truth of the wonderful cures performed by means of the tractors, were eight university professors, four being professors of medicine; twenty clergymen, ten being D.D.s; thirty-six medical men, nineteen being M. D.s.

To prove the error of these doctors of divinity and medicine, two men in Bath had precisely similar instruments made of wood, painted and shaped so as exactly to resemble the real ones. These were publicly tried with all due solemnity, at first upon five hospital patients. Of these four were affected with chronic rheumatism in the ancle, knee, wrist, and hips. The fifth had chronic gout. *All were much relieved.* One was sure that his knee was warmer, and thought that he could walk across the room. *He did so, though he had previously been unable to stir.* The following day the real metallic tractors were applied, with results precisely similar. Mr. Smith applied the wooden tractors to a patient with rheumatism of the shoulder, so severe as to prevent his raising his hand; *in four minutes the man was able to lift his hand.* In another patient the fictitious tractors caused so much increase of suffering, that he would on no account submit to a repetition of the operation. Had these sapient individuals but half the talent of Mesmer, they would soon have discovered the real scurce of action.

Fascination has been known and practised to a greater or less extent in the United States since the early part of the nineteenth century; at the present time we have scores of lecturers traversing the country. The people receive it rather doubtingly; they want some show of reasoning to sustain what they consider experiments against the laws of nature. To show the feeling I cannot do better than add an editorial from one of my exchanges. After describing the scene, performers, and examining committee, to the latter of which he belonged, he says:—

"The first evening the lady's eyes were bandaged so that the committee were satisfied she could not see. On Thursday night more than usual pains were taken. Adhesive plasters were put over her eyes, and they did positively adhere so closely to her skin that they were with difficulty removed. Over these, soft kid gloves were spread, over these again, a handkerchief was tied, secured above and below by tape strings.

"It was an unusual and very severe test. Her eyes were, without doubt, IN TOTAL DARKNESS—in regard to that, there is no possible mistake; but notwithstanding all our precautions in bandaging, SHE DID SEE. She read the names of a score of newspapers, and some of the smaller print on them—she read writing with a lead pencil—told the time by numerous watches, though set far from the true hour, and described the watches. She also read several bank notes.

"She held the papers, etc., over her forehead, at the lower edge of her hair. While engaged in her readings she was very sprightly, and evinced considerable smartness—but we have not room for farther detail.

"In regard to this matter, we can only say that we do not comprehend it. If it be trickery, it is splendid trickery. The jugglers of the East astound you, but they prepare all the machinery—here you are allowed to prepare the subject to your own satisfaction. In regard to the presumption that arises in the mind, as soon as we are convinced that she cannot see with her eyes, that there is some series of cunningly devised and secret signs by which communications are made to the young lady, we have to say, that watches and papers were given to her that no eye saw but our own, and yet she told as usual

"Our stubborn skepticism prompts us to say, that though witnessing such bewildering tests a thousand times, we would believe we were a thousand times deceived, before we would grant that she saw with her brain, up through her skull."

Lady. I think there is evidence enough on the subject of fascination to convince the most incredulous, and were the matter of our conversation published, no one would rise from its perusal without being a thorough believer.

Doctor. In advancing the various arguments, I have merely reviewed the substance of the conclusions that have convinced myself. Some curious phenomena accidentally observed, led me to examine the matter closely, and the result has been. not only an entire conviction of its truth, but an equal conviction that that truth may be made so plain as to appeal to the common sense of all.

My knowledge of the subject has given me a clue to unravel much of the history of superstition in this world. I have found fascination to be a most terrible agent of imposture in all ages, as we have before seen Jehovah punished its practice among the Jews with death; that is, its practice as regarded the production of spiritual clairvoyance for purposes of divination: in other respects it was extensively known and practised as a curative agent. Witness the case of David, etc.

In our own day, Robert Cochrans, Joseph Smiths, Swedenborgs, etc., etc., are in turn gaining hosts of followers, and all through ignorance on this subject. Fascination, however, will most assuredly crush them, and so well is this fact known, that, perceiving its onward progress, many of them are even now endeavoring to wrest its phenomena to support their own views. Professor Bush says that the "Clairvoyance of Swedenborg was not induced by human agency." Granted. "That, unlike the magnetic seers, who are in a state of *internal*, but not at the same time of *exter*-

nal consciousness, Swedenborg was in both at once *His prerogative was the opening of a* SPIRITUAL *sight which left him still in the enjoyment of his* NATURAL *sight.* Hence he could know and distinctly describe in his state of external consciousness, what he saw with his spiritual eyes, and could know with perfect accuracy, free from all illusion, what was going on around him in the natural world, at the same time that he perceived what was transpiring in the spiritual world; and so perfectly was he in the possession of external consciousness while in the exercise of his spiritual perceptions, that on one occasion, when moving in a funeral procession, he was actually engaged in conversation with the spirit of the person whose body he was following to the grave."

If such be the case, and Swedenborg's supernatural claims rest on the fact of his seeing and holding communication with both worlds at once, then must a single well-authenticated fact, like that of the boy who possessed a similar power mentioned some pages back, overthrow all such claims, or indefinitely extend them; and this, too, without considering that Swedenborg's revelations were a natural sequence to his former philosophical speculations, and but confirmed them. However, as my object in these conversations was more to suggest thought than enter into detail, we will now end them.

LADY. Will you be kind enough to give me some directions with regard to the best manner of fascinating? As you think ladies as well as gentlemen can practise it, I would like to be able if ever called upon.

DOCTOR. With pleasure; and I do it the more readily because I know your motives in such cases would be proper ones. It is certainly one of the most remarkable facts in the whole matter, that the moral feelings exercise an extraordinary influence. Philippe the First of France has not been the only one who lost the power by ill conduct; for the evil disposed often become curbed and shorn of their strength in a surprising manner.

Both patient and operator should be comfortably seated, so that neither will experience uneasiness in consequence of position. The seat of the operator should be higher than that of the patient—the apartment neither too hot nor too cold, and as few witnesses as possible, but one person always present. Never begin the process if agitated, but wait until perfectly calm and self-collected. When all is ready, seat yourself opposite the patient, inclining sideways, and taking his hands so that the inside of the thumbs of each press against the other, the hands resting on a knee of each; keep them in that position a few minutes, until an equal warmth is felt, gazing, after the first minute, steadily, but not with an effort, into his eyes. Still gazing, release his hands, and unite your own with the palms touching each other; then separate them to the right and left transversely, (remembering that while communicating the influence, the hands, when passing from the patient, must always have the back turned to him, and the reverse when taking him out of the state,) raise them to the head, let them rest on it a few moments, slowly carry them down the side and lower part of the head to the shoulders; allow them to rest a few moments there also, and then gradually pass down the arms to the end of the fingers which should be resting on the knees; all this time only the extremity of your own fingers should touch, and that very gently ; at the end of each pass slightly shake your fingers, as if to throw something from them. You had better continue the passes, as a general rule, until the eyes of the patient close. Then allow your hands to rest two or three minutes on the head, and keeping your fingers in a crooked position, so as to directly point to but not touch the parts you traverse, pass slowly over the eyes and chest to the stomach, where the thumbs had better remain about twice as long as they did on the head, the fingers resting on the sides ; thence carry them down to the hips, knees, and feet. Do this a few times, and then confine your passes to the arms and body, without the head.

The sitting may continue from half an hour to two hours ; but forty minutes I have found a good average time. Of course, it depends, in a great measure, on the impressibility of the patient, and the degree of relief given. When it is desirous to terminate it, make two or three passes from the knees to the feet ; then several transverse passes before the face and chest in a brisk manner.

Make up your mind, beforehand, not to be alarmed at any strange and unexpected symptoms that present themselves during the operation ; and whatever does occur, keep perfectly cool, and betray no agitation of manner ; if you let any signs of alarm escape you, your patient is almost certain to go off into convulsions. Mrs. W. came into my house, one day, in extreme pain, arising from a wrist that had been twice sprained ; at times her agony was dreadful, nd opiates, etc., entirely failed to relieve her. A few passes down the arm and wrist gave ease, and finally, by continuing the process the pain ceased ; at the end of twenty-four hours it returned, and the same results followed the operation The third time, I proposed putting her to sleep; after a while her eyes closed; she made a violent effort to open them, and, failing, became much frightened, and a cold perspiration broke out over her. I instantly reversed the passes; but it was some time, after awaking, before she became calm. She was afterward courageous enough, went to sleep without trouble, and became finally cured.

One of the first cases upon whom I ever operated was a Miss L. After a lapse of some ten minutes, she declared herself incapable of breathing, and I could not discern the pulse at the wrist. Her agitation became extreme; she said death would surely ensue, and wished her cousin, who was present, to call her mother. The cousin, equally with herself, was frightened; so much so, indeed, that she was incapable of obeying her request, though making great efforts to do so, seeming like a person with the nightmare. Though dreadfully agitated, I continued the passes, directing them altogether from the knees to the feet, and making some in in a transverse direction over the chest. She soon breathed and the heart beat; but, ere both actions were regularly established, she was insensible. I have rarely seen a person more benefited by the effects of fascination.

When you can be guided to the seat of pain, keep your fingers over the spot, and make the passes in that direction. Toothache, headache, sore-throat, rheumatism, etc., will vanish under such manipulation, often with a rapidity that equally astonishes the operator and the patient.

In operating, husband your strength as much as possible use no more exertion than just enough to give the requisite motion to the hands and arms. You will lose enough by imparting the nervous fluid, without unnecessarily increasing the debility. This is a common fault with young fascinators.

If the operator succeeds in giving relief from pain, he has produced the only phenomena he ought to expect. Do not allow the skepticism of those about you to rashly involve you in the mazes of experimenting on your patients. Point the unbeliever to the results; if he attributes them to imagination or anything else, don't dispute the matter—let him have his own way, without your interference. Have patience—bide your time—and your turn will come, and, when it does, will richly recompense the delay, and satisfy your curiosity. So great are the marvels, that our minds must be gradually prepared to receive them, or we could not bear the communication with safety.

Newnham remarks, that the most important and fundamental characteristic of a good operator is, on his part, the possession of sound thought and firm will; he must not employ his processes in a thoughtless or careless manner, or they will be unsuccessful; but he must really throw his mind into the duty—must be attentive to what he is about—must wish to do good—not allowing himself to wander into distant or discrepant scenes, but concentrating his will upon the object before him. He should be free from impertinent curiosity—a capital moral blemish in ordinary life, but still more so in magnetic pursuits—because the good of the patient is forgotten, the attention of the operator distracted, and fixed upon any object rather than his patient's health; in such cases, no satisfactory results can be expected.

Deleuze speaks of a process that may be employed with great advantage in local pains; this is, to place a piece of linen several times folded, or a fragment of woollen or cotton cloth upon the suffering part; apply the mouth above it and breathe through it; it excites a lively sensation of heat, and the breath, which is charged with the nervous fluid, introduces it into the system. Then expel the pain by passes.

Somnambulism (says Deleuze) demonstrates the two-fold existence of the *external* and *internal* man in a single individual. It offers a direct proof of the spirituality of the soul, and an answer to all objections made against its immortality. It makes evident the truth, known to the ancient sages, that *man is an intelligence, served by organs.* Never seek to produce it; but when it comes naturally, profit by it as much as possible. It is dangerous to try to produce this state by directing passes to the head; make them equally over the body. If nature is disposed to this crisis, the fluid will, of itself, be carried to the brain, and the tendency be manifested by the extreme tranquility of the patient. Then, after passing your fingers, five or six times, at a short distance before his eyes, ask him whether he sleeps, and if he answers in the affirmative, you may ask him regarding the treatment. Don't press questions, if he shows no disposition to speak: let him alone—it is of no consequence; it is not your object to render him a sleep-waker, but to cure him. If such a state were necessary, it would spontaneously develop itself.

IN CONCLUSION, I WOULD REMARK, THAT THE ONLY OBJECT OF THE OPERATOR SHOULD BE TO CURE HIS PATIENT; THIS CANNOT BE TOO STRONGLY INSISTED UPON. TRY NO EXPERIMENTS; WAIT PATIENTLY, AND FOLLOW THE TEACHINGS OF NATURE.

APPENDIX.

COMMUNICATION FROM REV. MR. BEECHER, ON MAGNETISM.

"In October, 1842, on my way to the synod of Genesee, I spent the night at the house of Mr. Hall, at Byron. In the evening I called on Rev. Mr. Childs. On entering the room, I found his son, an intelligent boy aged ten years, then in a cataleptic fit, sitting in his father's arms and his feet in warm water.

"In a few moments he recovered. He frequently had from three to six fits a day—had received the best medical attendance in the region; was no better—daily worse. He had lost entirely the power of speech, for several days. Great fears were felt that he would never recover There was a sore place on the back corner of his head, and on the spine, occasioned by a fall, some months previous. When the fits passed off he became hungry, and not at all drowsy; and during the interval appeared preternaturally bright, and engaged in sports with companions, as usual.

"After I had conversed a few minutes, I said, 'I would have him magnetized;' to which his father replied, 'I don't believe in it at all,' and the mother added, 'If you'll put *me* to sleep, I'll believe, and not without.' I replied, 'I would try it: it may do good, and can do no harm.' During this conversation, I made a few passes in front of the child, chiefly with one hand, and without any particular concentration of the mind or will, and mostly with my face toward the mother. In less than a minute the father said, 'He is in another fit! No, he isn't, I declare: I believe he is asleep.' Much surprised, (for I had never magnetized one,) I said, 'It surely cannot be what I have done; but if so I can awaken him.' Then, with a few reversed passes, he awoke. 'Well, this is strange,' said I; 'but I can put him asleep again, if it is *real.*' I then seriously repeated the passes, with both hands, for one or two minutes, and placed him in the perfect mesmeric sleep. I then fixed my eyes on a lady on the opposite side of the room, the boy not yet having spoken for three days, and said, 'Henry, what do you see?' in a full, decided voice. He replied, 'Azubah.' I then looked his mother in the face, saying, 'What do you see?' He gave a name unknown to me: I looked to his father, who replied, 'It is her *maiden name.*' I then took vinegar into my mouth, and said, 'What do you taste?' '*Vinegar,*' speaking with great tartness, and at the same time making many contortions of the face. The mother now whispered to one of the children, who left her seat, and I said, 'Henry, what is she going for?' 'Sugar, and I love it,' he answered. She went to the closet, and brought the sugar. I put some into my mouth, which seemed to give him the same pleasure as if I had put it in his own. I then said, 'What kind of sugar is it? 'Muscovado.' 'What is its color?' 'Well, sir, a kind of light brown.' A small glass jar, with a large cork, was now placed in my hand, when immediately I observed the olfactory nerves affected, and the muscles about the nose contracted at the same moment. I said to the girl, 'What is it?' to which the boy answered, 'Hartshorn.' 'How do you know?' 'I smell it.' I myself neither knew nor smelt. I then took out the cork and applied it to my own nose, when he instantly placed his fingers on that part of the nose next the forehead, and said, 'I feel it here,'—just where I myself experienced the burning sensation.

"During all these experiments he sat on his father's knee, with his head down on his breast, and reclining against his father.

"I now asked him, 'What is the matter with you?' 'My brain is sore.' 'Where?' 'At the bottom of it.' 'Where it joins the spinal marrow,' *(medulla oblongata?)* 'Yes.' 'What occasioned it?' 'I fell from the great beam in the barn.' His mother here asked him, 'Why did you not tell us before?' 'I feared you would not let me play there.' 'Can Doct. A——— cure you?' '*No.*' 'Why not?' 'He don't know anything about it,' (very decidedly.) 'Can Doct. C———?' 'No.' 'Why?' 'He don't understand it.' 'Will the medicine you now use do you good?' 'No' 'Of what is it composed' 'There is turpentine in it.' 'Does the Doctor give it you for tape-worm?' 'Yes.' 'Have you any?' 'No.' 'Would you like to walk?' 'Yes.' 'Well, walk.' He arose promptly, stepped between the chairs, and said, 'Well, sir, where shall I go?' 'From the wall to the door, and back.' This he did, avoiding every obstruction; and, at my direction, returned and sat again with his father. I now, without notice to any one, placed my finger on the organ of Benevolence, thinking at the moment it performed the office of Veneration, and said, 'Would you like to pray?' With some lightness, he said 'No.' Some questions were asked, by his mother and myself, about the Bible, etc.; but no Veneration appeared. I then recollected the true office of the organ, and said, 'Have you anything in your pocket?' He took out a knife. 'Give it to me for my little boy,'—which he did promptly. I removed my hand. 'Have you anything else?' 'I have a pencil.' 'Will you give me that for my other boy?' 'It has no head?' 'Never mind; give it—won't you?' 'I shouldn't like to. 'Well, but you will!' 'I couldn't come it!' *(with peculiar emphasis.)* Azubah said, 'Ask him where the head of the pencil is.' Where is it, Henry?' 'Well, sir, in the parlor.' 'Where?' 'On the window.' Azubah said, 'Why, I picked it up and put it there to-day! *(He certainly did not know this.)* I then said 'Henry, can you get it?

He arose, and went into the parlor in the dark, and took the head of the pencil-case from the window, to the very great surprise of us all. Indeed, we were all so astonished, that it seemed a dream. During these and subsequent proceedings, he spoke with a promptness, boldness, and propriety, in advance of his years, and beyond himself in his natural state; and so perfectly evident was it that he was in a somnambulic state that no skeptic, I verily believe, *could* have doubted.

"At my request he returned to his seat. I touched Benevolence, and instantly he handed me the pencil-case. 'For my boy?' 'Yes, sir.' I then silently, and without any willing, and with a feeling of curiosity to see and test the matter, touched Reverence. His countenance at once assumed a softened and solemn aspect. 'Henry, would you like to pray?' 'Yes, sir.' 'You may.' He then commenced praying inaudibly. 'You may pray aloud.' He then prayed in a low, audible voice. On touching Tune, he sang a tune, though not in the habit of singing. On touching Combativeness and Destructiveness, he raised his clenched fist to strike me. He was ignorant of Phrenology, and also of my intention to touch any particular organ; nor did I, in any case, *will* the activity of the organ. I now took out my watch, and holding the dial towards myself, and above the line of his vision, his eyes being closed, and his head bowed forward, and my hand also being between him and the watch, I asked him, 'Henry, what time is it?' 'Eight o'clock, sir,'—which was exactly the time by the watch, though by the clock in the room it was fifteen minutes faster. 'Henry, how long ought you to sleep?' 'Well, sir, I must sleep two hours and five minutes.' 'Will you then awake?' 'Yes, sir.' 'Very well.' This I did for the purpose of testing his knowledge of time, as stated by Townshend, an English clergyman, whose work on this subject I had read.

"I then said, 'Will you go with me to Mr. Hall's?' 'Yes.' 'Well, now we are there—now we are in the parlor: who is here?' 'Mr. and Mrs. Hall; Mr. and Mrs. Bardwell.' 'Who else?' He did not give their names, but intimated that they were strangers. He described the room and position of things, all of which I found correct, on going to the house shortly after. These persons were not in the habit of being there in the evening, but company having come in, they were all together at that moment. As this was in his own town, I did not deem it *proof*, and so said, 'Will you go to Batavia?' 'Yes.' 'Well, now we are there—now we are at my house—now we will go into my room: what do you see?' 'I see a large table covered with black cloth, and with books and papers scattered over it.' 'How large is it?' 'It is about five feet long.' 'How many book-cases?' 'Three, sir.' 'What sort of a stove?' He could not or did not describe this, for it was so queer a thing as not to be easily described. Nor did I press him, for all his answers had been perfectly correct, and I was sufficiently astonished; for he had never seen my study; and no other minister, I am sure, has such a table, (five feet by three and a half,) or has left it in such confusion as mine was at that moment.

"I may here say that, during the whole period of his sleep, he could hear the questions of others put to him, and would answer them, if I were willing; but if I willed otherwise, or forbade him to speak, as I often did, he then would answer no one but myself, not even father or mother; nor could he hear their conversation with me, nor with each other.

"I now left him for an hour, and went back to Mr. Hall's, giving him leave to converse only with his father. On my return, I found him in the same state. He utterly refused to speak to any one but his father, and told him that he should not have another fit till the following Sabbath, (this was Monday evening,) which proved true; but when that day came, he had several.

"At nine o'clock and three minutes, holding my watch as before, and standing eight or nine feet from him, I asked the time. He gave 'nine o'clock and five minutes.' 'Look sharp,' said I. 'Oh! three minutes,' said he. We were now curious to see if he would awake himself at the two hours and five minutes, and as he did not awake when the clock in the room reached that time, I said, 'Henry, did you mean by my watch, or by the clock?' 'By your watch, sir.' 'Very well.' At the exact moment he opened his eyes and looked around, and this without any act or willing of mine; and what was very affecting and convincing, he could no longer speak at all, and was unconscious of all that he had said or done.

"I have said that he had no return of fits till the following Sabbath One day after that Sabbath, he came in to his mother, much agitated, and apparently going into a fit; and making the passes, he solicited his mother to do it,—who, merely to pacify him, passed her fingers over him; and soon he fell into the mesmeric sleep, and escaped the fit. After this he was so highly charged by his sister, that when she was in the next room, in the closet, he would instantly taste anything she tasted, eat what she ate, etc.

"In ten days I returned, and magnetized him again, and went through several of the above experiments. He always, while in the mesmeric state, declared that it benefited him, relieved all pain, and would cure him.

"After I left, at my suggestion, he was daily magnetized: his fits left him, his voice returned, the sore spots on his head and back were removed, and he recovered rapidly, till the family could no longer mesmerize him. A man in the village was found, who could and daily did, till he appeared entirely well. On omitting it he had a fit or two, and it was resumed; and when I last saw the father, he informed me that they considered the child cured.

"I may add, I have since cured toothache, greatly relieved tic doloreux and removed other pains and swellings, as well as headache. I am not, however, a full believer in all which is affirmed of clairvoyants--what I *see* and *know*, I believe. In respect to many well-authenticated facts, I neither affirm nor deny. That there are many cases of gross deception and imposition, I fully believe. On such a subject, it can hardly be otherwise. This, however, is a reason why men of character and intelligence should *investigate* it, rather than otherwise. 'But it is deception. Well, then, let us expose it by a fair trial. 'But it is the work of the devil!' How do you know? What is the evidence? What harm has it done? 'Oh, bad men have used it for bad ends!' And what is there in the world that has not been so used? If it is the work of the devil, then we are not to be ignorant of his devices, and should make the examination for one's self; for ignorant and bad men will not expose his devices. From experiment and observation, I have no doubt that, as a remedial agent, mesmerism is yet to accomplish much good; and no harm can result from it, except, like all other blessings, it be abused.

"WILLIAM H. BEECHER.

"*Boston, June* 28, 1843"

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THE PHILOSOPHY

OF

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IN A COURSE OF

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BY JOHN BOVEE DODS.

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DEDICATION

TO G. C. MARCHANT, M.D.

My Dear Sir—For twenty years past I have been intimately acquainted with you, and I enjoy the pleasing reflection that we have, during that entire period, remained warm, personal friends. Fully sensible of your sterling integrity and honor as a man and a distinguished American citizen, and sensible that the science of Electrical Psychology will prove to be most deeply interesting to your discerning and gifted mind, and that you will love, honor, and cherish it as you do the other sciences of the day with which you have become familiar; and having so often and deeply felt your friendship in acts of kindness, I claim the favor, as an expression of my confidence in your goodness, and also in your medical skill, to dedicate this work to you. You will perceive that I have intentionally written it in a fanciful style, so as to make it pleasing to readers in general; and surely you, as a critic, will overlook this, as I have also endeavored to please the scholar by throwing out before him a fair and liberal specimen of original thought. As such it is most respectfully inscribed to you by your sincere friend,

J. B. DODS.

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INTRODUCTION.

THE author received the following invitation from the undersigned honorable gentlemen, members of the United States Senate, to lecture in Washington city, District of Columbia:

"WASHINGTON, Feb. 12th, 1850.

"To DR. DODS:

"DEAR SIR—Having received highly favorable accounts of the addresses delivered by you, in different sections of the Union, on 'Electrical Psychology,' a department of science said to treat of the philosophy of disease, and the reciprocal action of *mind* and *matter* upon each other, we would be gratified if you would deliver a lecture on the subject in this city, at the earliest time consistent with your convenience. With a view to the accommodation of members of Congress and the community generally, the Hall of Representatives, if it can be procured, would be a suitable place for the delivery of your discourse.

"Yours, truly,
"GEO. W. JONES, THO. J. RUSK,
"JOHN P. HALE, SAM HOUSTON,
"H. CLAY, H. S. FOOTE,
DAN. WEBSTER."

To the above the following answer was returned:

"To the Hon. Tho. J. Rusk, Sam Houston, H. S. Foote, Geo. W. Jones, John P. Hale, Henry Clay, and Daniel Webster, all of the United States Senate:

"GENTLEMEN:

"In reply to yours of Feb. 12th, I would respectfully say, that I feel myself highly honored to receive an invitation from you, to lecture upon the philosophy of Electrical Psychology in the United States Capitol. With this invitation I comply, and it affords me much pleasure to do so. Owing, however, to circumstances and previous engagements, my earliest and only time during my present visit in Washington, will be on Saturday evening, Feb. 16th. I will therefore appoint that time as most suitable to my convenience, and commence my lecture at half-past seven o'clock.

"With sentiments of high consideration, I am
"Yours, truly,
"J. B. DODS."

The science of Electrical Psychology I have taught to more than a thousand individuals, and in all cases I have uniformly charged gentlemen *ten* dollars for tuition, and ladies *five*. I have also made it a uniform practice to lay them indiscriminately under written obligations, pledging most solemnly their sacred honor, as ladies and gentlemen, that they would never teach it to any persons but of good moral character, nor, in any instance, for a less price than above stated, and that they would lay all those whom they taught under the same written obligations and pledges. But it so happens, that unprincipled individuals, regardless of their pledges of sacred honor, have, in numerous instances, violated them, and taught, or at least pretended to teach, this science to others for any price they could obtain. There are, however, many honorable exceptions to this course of conduct among my students, and I am proud to bear this testimony to their faithfulness.

The substance of the first NINE of these LECTURES was delivered, by request, in Washington city, last February, and immediately published. The sale of the work has exceeded my expectations, and, in this Fourth Edition, I have fully revealed the secret, so that the reader, by the faithful perusal of my Lectures XI. and XII., will be as well qualified to experiment as those unprincipled pretenders, above noticed, who go about as teachers. They have even made their pupils believe, that nothing was necessary for them to know only the *nerve or gripe to get a communication and to speak in a positive manner and full tone of voice to the subject!* But you will perceive, on reading this work, that they have not taught you the A, B, C of this science. Its philosophy has cost me seven years of intense study, and it can not be revealed in a moment, not taught but by a workman. Honor and justice, under all these circumstances, require me to publish the mode of experimenting, so that those who shall teach it hereafter, will be compelled to study and prepare themselves for the work, as qualified instructors, because something more than the SECRET, which Lecture XI. reveals, will now be required

J. B DODS.

NEW YORK, September 26th, 1850.

ELECTRICAL PSYCHOLOGY.

LECTURE I

LADIES AND GENTLEMEN:

I HAVE received an invitation from several EMINENT MEMBERS of the United States Senate, to deliver a Lecture on the Science of Electrical Psychology—the philosophy of disease—the connecting link between *mind* and *matter*—their reciprocal action upon each other, and the grand operations of nature that this science may involve. In compliance with this invitation, I now stand before you for this purpose, and will endeavor faithfully to discharge my duty. In order to do my subject justice, I shall be under the necessity of making a very liberal draft on your time and patience. Sensible that I stand here by the invitation of those distinguished orators, statesmen, and generals, whose eloquence, in defence of LIBERTY, has been felt by thrones—whose wisdom has given laws that are respected by all nations on earth, and make millions of freemen happy—and whose heroism has breasted the battle storm in defence of human rights—it may well be expected that I should, in some measure at least, feel the embarrassment that the occasion itself must naturally inspire.

As the Creator of the universe has endowed man with reason, and assigned him a noble and intelligent rank in the scale of intellectual and moral being—and as he has commanded him to use this faculty—so I may with justice remark, that he who *cannot reason* is a fool; he who *dare not reason*, is a coward; he who *will not reason*, is a bigot; but he who *can* and *dare reason*, is a MAN.

The realms of nature lie open in boundless prospect above, beneath, and around us. As inhabitants of this globe, we occupy but a small spot—the centre, as it were, of the immense universe that swarms with a countless variety of animated beings, and contains endless sources of mental and moral delights. Order, harmony, and beauty are so perfectly woven together and blended throughout NATURE, as to form the magnificent ROBE she wears, and with which she not only charms and even dazzles the eyes of the beholder, but conceals the overwhelming power and majesty of her PERSON. As she moves, the most grand and awful impressions mark her footsteps on the globe's surface or centre—in air or ocean. She smiles in the gentleness of the calm, and frowns in the fury of the storm.

But whether silence reigns, earthquakes rumble, or thunders roll, she keeps her mighty course unaffected by the revolutions of ages.

At the same time that there is confessedly something most grand in the operations of nature, and even while the most gifted minds are reveling with delight amidst her magnificence, and feasting upon her splendors, there is still something humiliating in the thought, that incomprehensibility continues to hold its dark and sullen empire over the causes of many of her most sublime manifestations. For a period of twice three thousand years, she has concealed beneath the shadow of her hand, not only the cause of worlds rolling in their ceaseless course through the illimitable fields of space, but also the rise and fall of vegetation, and the phenomena of life and death.

Man is intellectually a progressive being. Though confined to a narrow circumference of space, and chained to this earth, which is but a small part of the unbounded universe, yet as his mind wears the stamp of original greatness, he is nevertheless capable of extending his researches far beyond the boundaries of this globe. His mind is capable of a ceaseless development of its powers. From the faint glimmerings of infantile reason, he passes on to that intellectual strength and grandeur when he can take a survey of the planets, the dimensions of the sun, trace the comet in its erratic course, analyze the works of God, and comprehend the vast and complicated operations of his own mind. How sublime is the contemplation, that he can invade the territory of other worlds, bring their within field-view of the ken of his telescope, and see them play their aerial gambols under the superintendence of attraction and repulsion.

But before I proceed any further, it becomes necessary that I clearly state the subject of my present course of Lectures, so that we may enter upon it understandingly, and, if possible, with a clear conception of its nature and importance to the human race. The subject, upon which I am entering, is that to which I have given the name of Electrical Psychology, as the one which is, in my estimation, the most appropriate. PSYCHOLOGY is a compound of two Greek words, viz., *psuche*, which means *soul*, and *logos*, which means *word*, *discourse*, or *wisdom*. Hence by PSYCHOLOGY we are to understand the SCIENCE OF THE SOUL. And as all impressions are made upon the soul through the medium of electricity, as the only agent by which it holds communication with the external world, so you readily perceive not only the propriety but the entire aptitude of the name ELECTRICAL PSYCHOLOGY.

Twenty years ago, I discovered electricity to be the connecting link between mind and inert matter, and on this discovery the philosophy of the present science is based. Ever since 1830, I have contended, that electricity is not only the connecting link between MIND and *inert* MATTER, but is the grand agent employed by the Creator to move and govern the universe. These views, in opposition to the doctrine of inherent attraction in matter, I advocated in Taunton, Massachusetts, in two Lectures I delivered before the Lyceum in 1832. The substance of these is embodied in six Lectures I delivered at the MARLBORO CHAPEL, in Boston, January 1843, by request of members of both branches of the Massachusetts Legislature then in session in that city ; and they have been most extensively published in this country, and republished in England. In that work they are applied to the philosophy of Mesmerism. I make these remarks so that ladies and gentlemen present on this occasion may know, that my views of the ELECTRICAL THEORY of the universe, and the CONNECTING LINK between mind and inert matter, are not the breathings of a momentary impulse, but of long and matured deliberation.

Electrical Psychology takes a most extensive range, and embraces a field rich in variety of thought. It is so startling to human credulity, that its truth cannot be believed, only by passing it through the ordeal of the severest scrutiny by oft-repeated experiments. As to the character and force of these experiments, I cannot better express them than in the following editorial notice from the "Saratoga Republican."

The editor of the Saratoga Republican having received a letter from the Hon. Richard D. Davis, formerly a member of Congress, in relation to this science, writes as follows :

“ Dr. Dods, who professes to have discovered a new science, to which he applies the name of Electrical Psychology, is at present giving a series of remarkable experiments, in our village, by way of illustrating its truth and undoubted reality. By it he professes to be able to perform the most startling and cunning experiments, upon persons fully awake, and in the most perfect possession of all their faculties. Controlling their motions—standing up, they find it impossible to sit down ; if in a sitting posture, they are unable to rise till the operator allows them to do so. He claims to have the power to take away the powers of hearing, speech, sight, and the memory, etc., whenever he pleases, and to return again these faculties instantly ; that he can change the personal identity of certain individuals, making them imagine for the time being that they are persons of color, that they belong to the opposite sex, or that they are some renowned general, orator, statesman, or what-not. He professes to be able to change the appearance and taste of water in rapid succession to that of lemonade, honey, vinegar, molasses, wormwood, coffee, milk, brandy ; the latter producing all the intoxicating effects of alcohol. He brings before his subjects the threatening thunder-cloud. They see the lightnings flash and hear the thunders roll ; the storm bursts over their heads, and they flee to a place of shelter, under a table, bench, or any thing that offers protection. All this while the individuals experimented upon are perfectly awake and in possession of their reasoning faculties.

"We are well aware, that the first impression upon the mind of the reader will be, that all this is absurd, ridiculous, and utterly impossible. This would be the natural conclusion of every one who had never witnessed any of these surprising phenomena; but the reality of all this is maintained by some of the most respectable and talented men in the country. We have permission to refer to several individuals of the highest standing and character, who are believers in this science, and have been pupils of Dr. Dods. We have before us a letter written by Hon. Richard D. Davis, from which we make the following extract. Mr. Davis says:

"The science which Dr. Dods teaches, is to my mind alike novel, instructive, and useful—full of speculation fit for the loftiest intellect, and replete with rich instructions for every condition of human life. So far as I am able to judge, I can safely say, that no person of ordinary capacity and intelligence can take the usual course of lessons from the doctor, who will not at its end sincerely acknowledge himself more than tenfold repaid for its cost of time, trouble, and expense; and the more the ability and information of the individual may be, the more ready will be the acknowledgment. I am unwilling to express more than half the gratification and instruction which I have received, and if my recommendation can prevail with any one to become his pupil, it is most cheerfully and earnestly given."

What I have now read in your hearing, will give you some idea of the nature of the experiments, and also what claims Electrical Psychology has, in the opinion of distinguished men, in relation to its pretensions to science and usefulness. But there is no question, that ladies and gentlemen, after admitting that these experiments are truly wonderful, and to them incomprehensible, will yet ask, of what use are they to the human race? The great usefulness and transcendent importance of this science to the human race consist in its curative powers over those diseases that medicine can not remove. As facts come home to men's bosoms, and rebuke the skeptic in a voice of thunder, so I cannot give a better answer to the question, nor render you a better service, than to read a few extracts from the city papers of Auburn, New York, where I last lectured and experimented. It is as follows:

"HIRAM BOSTWICK, Esq., so long and so well known in this city [Auburn] and county, during more than two years before he saw Dr. Dods, did not take a natural step. For a year and a half last past, could only slowly drag his feet along, as though they were attached to wooden legs, and, at that, did not attempt to drag himself about the streets. Besides an attack last spring (which was the fifth stroke of palsy he had received), he could not even distinguish light from darkness, with his right eye. In a word, he was dead to happiness and usefulness. He met Dr. Dods, and in less than a week he was taking walks of a mile in length. With his right eye he distinguishes persons, and is constantly improving, while he is daily promenading our streets with the perfect control and use of every muscle, and is quite as happy as any man we meet."

I will read again from another Auburn paper. It is as follows:

"Do the dumb speak and the deaf hear? In Auburn, in October, 1849, they do. This forenoon, two girls went to the City Hall, neither of whom could hear a conversation in an ordinary tone. They were operated upon some five or six minutes each, upon the principles of Electrical Psychology as taught by Dr Dods, and when they left, one of them could distinctly hear an ordinary conversation, and the other could as distinctly hear a whisper."

"Yesterday noon, a lady from Massachusetts called upon Dr. Dods, at the Western Exchange. Her eyelids were so drawn down over her eyes that she could not see, and she could not talk. In twenty minutes she could both see and converse. If any one discredits this statement, let him ask Gen Wood, the gentlemanly proprietor of the Exchange When this blind and dumb lady came, her female attendant stated to Gen. Wood, that her friend had not opened her eyes for three years, and for the last year had not uttered a syllable. The afflicted lady made the same statement, after the doctor had restored her wonted powers of speech. During the three years, she was for one of them confined in a dark room, to avoid the supposed injurious effects of light. She could not raise the upper lids of the eyes.

"Such was her situation when she called upon Dr. Dods at the Exchange yesterday; and in half an hour she left again, drinking in with delight the prospect about her, and from which for years she had been entirely shut out, and while at the same time she poured forth her joy in words which it may be well imagined were those of the purest ecstasy. Her friends tried to prevail upon her, when she reached the carriage at the door, to shield her eyes, lest the sudden change from darkness to glare should have a deleterious influence upon those sensitive and delicate organs; but a gaze about the city was too rich a treat to be lost, and she availed herself of the opportunity to enjoy it.

"As this lady had been so long and so severely afflicted, had availed herself of the knowledge and skill afforded by the medical profession, and was at the time traveling in search of health, I thought the case worthy of mention.

"Do not understand me to be one who, even if in his power, would do any thing to depreciate the high estimation in which the medical profession is so justly held. Not at all. I regard it as one of the noblest of all pursuits, and believe that its practitioners, as a class, are not excelled, if equaled, by any other in kindness, self-denial, and humanity. But I will say, that every physician ought to understand Dr. Dods' system of Electrical Psychology. There is no room to doubt that it will not only give him a knowledge of laws and phenomena of the human economy he does not now know or comprehend, but will enable him to afford relief and restoration in cases where before it was out of his power.

"Granting this to be so—and the appeal here is to facts which cannot lie—what is the duty of the honest physician? Is it to sneer at a system or science which, with a respectable face, makes even these pretensions?—which professes to unfold laws and powers of mind and body which they do not understand, and backed up by actual, tangible results, which utterly dumbfound the whole of them? Is *sneering* his duty, when his hands hold the scales in which are deposited life and death? Is it not rather his duty to investigate the matter—to probe it to the bottom—to know all that can be known about it?

"The community will answer these questions, because they are deeply interested in the answer. In this city, cures will be performed within one year, by the pupils of Dr. Dods, in cases where the present medical system has been exhausted in vain. This will test the question. And by this test, every physician who sneers at Electrical Psychology will be compelled to abide. From it he *cannot*, and *will not* escape. I will refer now to only one beauty of the electro-psychological treatment of pain and disease. Its pharmacy is always perfect—it is of God."

From the extracts which I have now read in your hearing, from the Auburn papers, you will at once perceive the power and glory that hover around this science, and the importance which is claimed in its behalf as one of the greatest blessings ever vouchsafed to the human race. So that you may see the high estimation in which this science is held by the citizens of Auburn, generally, where these cures were performed, I will trouble my audience but once more, and ask their indulgence while I read the resolutions they unanimously passed in behalf of Electrical Psychology as a great and important science, which resolutions were published in the Auburn papers. I will also read the prefaced remarks of the editor They are as follows:

"ELECTRICAL PSYCHOLOGY.—Dr. Dods closed his Lectures, in Auburn, on Saturday evening. It will be seen by our columns this afternoon, that the gentlemen composing his CLASS, availed themselves of the occasion to express their views of Electrical Psychology, and of the manner in which the DOCTOR sustained his relations as their Instructor in his system. It is enough to say that the CLASS numbered gentlemen of undoubted intelligence."

"*Proceedings adopted by the Auburn Psychological Class.*

"At a meeting of the CLASS of forty-five persons, who had taken private lessons of Dr. J. B. DODS in the science of Electrical Psychology, held at the City Hall, in the city of Auburn, on the 27th day of October, 1849, John P. Hulbert was called to the chair, and Dr. S. N. Smith appointed secretary.

"On motion, a committee of three was appointed by the chairman to draft and report to the meeting resolutions expressive of the views and feelings of Dr. Dods' pupils, in the city of Auburn, in respect to the lessons and lectures given them by him."

"On motion, the chairman and secretary were added to the committee.

"The committee reported the following resolutions, which were unanimously adopted by the meeting.

"Resolved, That the science of ELECTRICAL PSYCHOLOGY, as taught to this class, by Dr. J. B. DODS, in a series of private instructions and lectures, we believe to be founded in IMMUTABLE TRUTH, and that it will accomplish for the human race an inappreciable amount of good.

"Resolved, That we believe ELECTRICAL PSYCHOLOGY has been, and will be eminently useful in alleviating the pains of the suffering, and in the cure of diseases; that it is as comprehensive as it is beautiful and beneficent; and that it is not only eminently calculated to enlarge and elevate the mind, but to impress upon it more exalted ideas of the infinite wisdom and goodness of the DEITY.

"Resolved, That we tender to Dr. DODS our thanks for the courteous and gentlemanly manner in which he has discharged his duties to us as his pupils. That he has, in all respects, redeemed every pledge or assurance that he gave us when we became his pupils, and that in parting from him we give him our warmest wishes for his prosperity and happiness.

"On motion, resolved, That the proceedings of this meeting be signed by the chairman and secretary, and delivered to Dr. DODS, and that they be published in the newspapers of the city.

"JOHN P. HULBERT, Chairman.

"S. N. SMITH, Secretary."

The subject of these Lectures is now fairly open fore us. I have explained what I mean by the term ELECTRICAL PSYCHOLOGY, and why I saw fit to give the science this name. The wonderful and startling phenomena that hover around it, like so many invisible angels, and which are made manifest in the experiments produced, I have also candidly stated. They consist in the fact, that one human being can, through a certain nervous influence, obtain and exercise a power over another, so as to perfectly control his voluntary motions and muscular force; and also produce various impressions on his mind, however extravagant, ludicrous, or wild—and that too while he is in a perfectly wakeful state. I have stated, that it is one of the most powerful remedial agents to alleviate the pains of the suffering, and to cure those diseases that set the power of medicine, and the skill of the ablest practitioner, at defiance. And from the published newspaper articles, letters, and resolutions of most highly reputable, and even distinguished men, which I have just read in your hearing, you can form an opinion of the effects produced, of the cures performed, of the high estimation in which this science is held by those who have acquainted themselves with its secret powers, and of their high estimate of its incalculable importance to the human race, and the future amount of good it is ultimately destined to achieve.

I have only read to you the testimony of the citizens of Auburn, but could produce the testimony of thousands more, from the various portions of the United States where I have lectured—of the importance of this science in the cure of diseases; and those, too, of a more startling character than any I have named. I can produce the testimony of hundreds, that this science has, in fifty minutes, restored to Lucy Ann Allen, of Lynchburg, Virginia, the use of her limbs; who had not walked a step in eighteen years, nor had she even been able to raise herself up from her pillow so as to sit in her bed for more than fourteen years. Such is the nature and intrinsic grandeur of this SCIENCE; such are the experiments and facts connected with it; such are its results that stamp it with the high impress of its sterling importance to mankind; and such are its lofty end and aim; and as such it must stand when the pillars of strength and beauty that support our Capitol shall fall and be crumbled to dust.

Some have the impression, that Electrical Psychology is, after all, but Mesmerism. In answer to such I will say, that there is a very marked difference between the two sciences, and this difference is easily pointed out. MESMERISM is the doctrine of *sympathy;* ELECTRICAL PSYCHOLOGY is the doctrine of IMPRESSIONS. In Mesmerism there is a sympathy so perfect between the magnetizer and subject, that what he sees, the subject sees—what he hears, the subject hears—what he feels, the subject feels—what he tastes, the subject tastes—and what he smells, the subject also smells; and lastly, what the magnetizer wills, is likewise the will of his subject. But the person in the electro-psychological state has no such sympathies with his operator. His *sight, hearing*, *feeling*, *taste*, and *smell* are entirely independent of the operator, and he continually exerts his will against him, and resists him with all his muscular force. The person who is aroused from the mesmeric slumber, has no remembrance of what transpired in it; while the person in the electro-psychological state, is a witness of his own actions, and knows all that transpired. The person in the mesmeric state can hear no voice but that of his magnetizer, or the voices of those with whom he is put in communication. But the person in the electro-psychological state, can hear and converse with all as usual.

If these distinctions are not sufficiently marked to settle the points of difference, then I will mention two more. I have found persons entirely and naturally in the electro-psychological state, who never could be mesmerized at all, nor in the least affected, under repeated trials. The other point is, that no person is naturally in the mesmeric state, but thousands are naturally in the electro-psychological state, and live and die in it. MESMERISM and SOMNAMBULISM are *identical;* they are one and the same state. And as no person is naturally in the somnambulic state, so no one is naturally in the mesmeric state. Though the experiments of both these states are performed by the same nervous fluid, yet this does not render the two sciences identical, any more than that they are rendered identical with fits, or insanity, which are caused by the same nervous force. These observations being sufficient for my purpose, are respectfully submitted to you for your candid consideration.

LECTURE II.

LADIES AND GENTLEMEN:

As the subject of Electrical Psychology is now fairly introduced, its phenomena stated, and its importance to the human race clearly pointed out, we are now prepared to enter the diversified fields of nature; to glance at the operations of mental and material existences; and to proceed understandingly to the consideration of its claims to PHILOSOPHY, as the foundation on which it rests, and the power by which its existence must be sustained. But as I am fully sensible that such strange facts as I have stated are most trying to human credulity—sensible that they are calculated to awaken the deepest feelings of contempt in the bosoms of the skeptical, and to draw forth the sneers of mankind—so I must be indulged to speak, in the first place, of the march of science, the beauty of the independent expression of our thoughts, and to notice the fate of the opponents of science in all ages of the world.

Entering, as I do, upon a theme entirely new, I am by no means insensible of the embarrassments that surround me. Were I called to address you upon any other subject than that of ELECTRICAL PSYCHOLOGY, I should stand before you with other feelings than those that now pervade my breast. It is by no means an enviable task to step aside from the long beaten path of science into the unexplored and trackless regions of solitude and silence. By so doing, and daring to think for myself, I am well aware that I assume no very enviable position as it regards popularity. Independent thought and fearless expression have ever drawn forth the scoffs and sneers of that portion of our race who have adopted, without investigation, the scientific opinions of others. I refer to those only who have received their ideas from others by inheritance, as they did their real estate. For the one they never labored, and for the other they never thought.

Such persons, though professing to be learned, and perchance even claiming to be the guardians of science, are nevertheless its greatest enemies ; and by exerting their influence in favor of old opinions, however absurd, and against any innovations, however true, useful, or grand, are checking the mighty march of mind. They are clogs of more than leaden weight hanging upon the chariot wheels of science that are rolling through our world. It commenced its career at the breaking morn of creation, with but few passengers on board, and has continued its course with increasing speed and growing glory down to the present moment. It now travels with the brilliancy and rapidity of the lightning's blaze, and even compels the very lightnings to speak in a familiar voice to man! Yes; they even write, not only their forky gambols on the bosom of the dark cloud, but they write on paper, and transmit human thought as swift as thought can move.

The chariot of science is destined to continue its majestic course, in duration coeval with our globe! Still more! it is destined to outlive the dark and sullen catastrophe of worlds! The chariot of science, with ever increasing power, magnificence, and glory, is destined to pass the boundaries of the mouldering tomb—to snatch immortality from the iron grasp of death, and roll on in living grandeur through the eternal world, gathering new accessions of intellectual beauty and unending delight. Its passengers here are mortal men. There they will be angel, archangel, cherubim, seraphim, and the glorified millions of our race! The mind of man wears the impression of divinity, the stamp of original greatness; and is destined to ripen in mental vigor as the wasteless ages of ETERNITY roll. Hence the very principles of our nature as an impression from the hand of God, forbid us to stand still. Their command is ONWARD.

If no human being had dared to hazard the expression of an original thought, then nothing in the realms of science would have been disclosed by speech, nor penned in books. A dreary, barren waste, wrapped in solitude and night, would have reigned for human contemplation. But instead of this frightful picture of desolation, we see those fruitful fields of mental and moral beauty, so rich in the scenery of thought, and in endless variety, present themselves to our view. A secret rapture of thrilling delight fills the heart as we glance over this lovely scene, on which human research has thrown a splendor surpassing that of the noontide blaze.

Had not some master spirits dared to freely speak and write their thoughts, then those pretended friends of science, who now oppose every thing that may appear to them both new and strange, would have been destitute of that knowledge they obtained from books; and not daring to think for themselves, they would have remained in mental night. It is by daring to step aside from the beaten track of books, and bringing forth from the dark arcana of nature into the light of day some new truth, that we add our mite to the common stock of knowledge already accumulated. He who denies us this grand right of our nature is a scientific bigot, and has yet to learn, that even the school and college were only established to discipline the mind for action. There the student, through books and instructors, is only made to see how other men have dared to think, and speak, and write, and thus his mind, being made to feel its innate freedom, power, and greatness, becomes inspired with a self-determination to do the same. This makes the MAN, and answers the lofty end of human existence. On the other hand, he who goes through life, leaning entirely upon books and the opinions of others, without thinking for himself, renders his present existence a blank, inasmuch as he lays his head in the dust, without its having bequeathed one original thought to the world, for the benefit of after generations.

The truths that God has established inherent in nature, are not only infinitely diversified, but are at the same time immutable and eternal. No possible addition can be made to their number, nor is it in the power of man to create or annihilate a single truth in the EMPIRE of NATURE. They exist independent of his *belief* or *unbelief;* and all he can do is to search them out, and bring them forth from darkness into the light of day. And he who has the magnanimity to do this, so far from being opposed and persecuted, should be sustained and encouraged as the benefactor of his race.

The Creator of the universe is the Author and Proprietor of the great volumes of nature and revelation. Hence divines, at least those who are men of letters, should not start at any new scientific revelations, and exclaim. "If this be true we must give up our Bibles!" As men of science, they have nothing to fear from new discoveries in the shoreless ocean of truth. The volumes of NATURE and REVELATION both claim the same perfect Author, who had every thing open and naked to his omniscient inspection, and exercised infinite wisdom in producing and establishing the order and harmony of the universe.

Though this globe, and perhaps the whole of our planetary system, was finished six thousand years ago, yet we have no reason to suppose that this was the first effort of his creating energy. We are floating in an immensity of space that knows no bounds, like the mote in the sunbeam. This is peopled with rolling worlds, in number beyond an angel's computation. And the residue, which has not yet become the abodes of light, life, order, and beauty, is filled up with matter still in its uncreated state. Hence the work of creation has been going on from eternity, and will continue to progress, so long as the throne of the self-existent Jehovah endures, without ever arriving at an end in the sublime career of creation! New brother creations are every moment rolling from his omnific hand, and that creating fiat will never, never cease.

These ideas of the wonder-working Jehovah, from whose all-forming hand worlds and systems of worlds are continually rolling, and have been, for millions on millions of ages, force upon us those amazing conceptions of the oppressive grandeur of his works under which the mind labors and struggles in its contemplations, but is borne down, and lost and bewildered in the immensity of the theme. ORDER, VARIETY, AND BEAUTY, in endless succession meet us on every hand.

All this has been accomplished by the Infinite Mind, through electrical action, and bespeaks the vastness and sublimity of the subject. It is the science of the living mind, its silent, mysterious workings, and energetic powers. It is a science that involves the majestic movement of rolling worlds, the falling leaf, and claims the GREAT LAW of the universe as its own. The vastness, as well as the transcendent importance of the subject, clearly evince that it is worthy to be embraced by every independent, noble, and generous mind. You will pardon me, Ladies and Gentlemen, for having, by a momentary digression from the present chain of my subject, anticipated a few ideas in relation to the creation and its vastness. These more properly belong to a future Lecture, when I shall come to show what connection this science has with the universe—with rolling worlds—yes, with a falling leaf. The fall of a single leaf is a catastrophe as dreadful to the thousands of inhabitants of its surface as the destruction of this globe would be to us. And the blotting out of our globe from the catalogue of worlds, would no more be missed amid the immensity of creation than the fall of a leaf compared to the sublime magnificence of the countless forests on this globe. From this digression I return to my subject.

That Electrical Psychology should meet with opposition from men of a peculiar constitution of mind, and a certain degree of scientific attainments, is nothing strange. Nor is it at all miraculous, that a few who are deemed men of talents, should oppose, and even deride it as a humbug. But as GENIUS is supremely higher than TALENTS, so I boldly and safely make the declaration that no man of GENIUS has ever opposed Electrical Psychology; nor in any age of the world has GENIUS ever been enlisted in opposing the dawning light of any of the sciences that have arisen on earth from the morning of creation to the present day. But as before remarked, that this science should meet with opposition from that class of scientific men, who always stand watching the direction in which the breeze of popularity may chance to blow with the strongest force, and who are anxious, through these means, to bring themselves into notice, and thus gain a momentary fame from the passing crowd, is nothing strange. It only proves the fact that ELECTRICAL PSYCHOLOGY is, in the infancy of its being, destined to share the fate of all great and useful sciences, that now stand unshaken in the republic of letters. All, in their infancy, received from such men a like opposition, and upon their founders they freely breathed out their derision, scorn, and sneers.

Harvey discovered the CIRCULATION of the blood, and disclosed it to the world. He was opposed and derided, and much of that *talent*, *learning*, and *cunning* we have referred to, was enlisted against him. They sought to paralyze the towering wing of his

GENIUS; to blast his reputation; to wither the fairest flowers of his domestic love, hope, and joy; and to hurl his brilliant discovery from the light of day to the darkness of night. But Harvey's name stands immortal on the records of true fame, and the blood still continues to frolic in crimson streams through its living channels, while his learned opposers are forgotten. Galileo discovered the rotation of this globe on its axis. So great was the opposition of the learned powers combined against him, that they arraigned him and his theory at the august and awful bar of humbug. There they fairly tried him and his discovery under the splendid and majestic witnesses of *derision*, *sneer*, and *scorn;* and the court very gravely decided, that his discovery was a heresy, and that he must openly acknowledge it to be so to the world. To this sentence he submitted—acknowledged his theory to be a heresy, but remarked, that he nevertheless believed it true. Galileo lives in the bright page of history. That sentence did not arrest the globe in its mighty course. It still continues to roll on its axis as he discovered and proclaimed, while the learned opposers of his theory, who courted popular favor at the expense of honor, are sunk into merited oblivion.

NEWTON'S GENIUS, when he was but a boy, intuitively drove him to study *gravitation* by piling up small heaps of sand, and to notice more strictly this power in the falling apple. It drove him to study *adhesion* by watching the union of the particled water at the side of some favorite stream; and to perfect this science he is next at the centre of the globe. From gathering pebbles in boyish sport on the ocean's shore, he is next among the stars, and at length proclaims to the world his system of PHILOSOPHY and ASTRONOMY. He was derided and mocked as a silly-headed fool, and his whole magnificent system was spurned with sneering contempt and pronounced a humbug by the old school of philosophers and astronomers. But substances continue to respect the law of *gravitation*, and rolling worlds to obey the law of *attraction* and *repulsion*. NEWTON lives in the brightest blaze of fame; for his name is written in starry coronals on the deep bosom of night, and from thence is reflected to the centre of the globe; while the opposers of his magnificent discovery are sunk to the shades of unremembered nothingness. The clouds and mists of their own evanescent fame have become their winding sheet.

Fulton was derided, and even men of science pointed at him the finger of indignant scorn, because he declared that steam—a light and bland vapor, which could be blown away by human breath—could move an engine of tremendous power, and propel vessels of thousands of tons burthen against wind and waves and tides. They declared it to be the greatest of humbugs, and the most silly idea that ever entered a silly brain;

or else the trick of a knave to make men invest capital in order to effect their ruin. His friends, even though not over-sanguine of success, yet defended him as a man of honor. But FULTON "stood firm amidst the varying tides of party like the rock far from land, that lifts its majestic head above the waves, and remains unshaken by the storms that agitate the ocean." So stern was the opposition, that some of the committed skeptics, who sailed from New York to Albany in the steamboat that first tried the experiment, declared, that it was *impossible* they had been conveyed a distance of one hundred and fifty miles by steam power! and that it must, after all, have been some power aside from steam, by which they had been enabled to reach Albany! The impression of FULTON'S GENIUS is seen on all the machinery moved in our happy country by this subtile power. It is seen in railroad and steamboat communications, that bring the distant portions of the United States in conjunction. It is seen in the majestic STEAMSHIPS of England, that bring her and the transatlantic world into neigborhood with us, by a power that triumphs over all the stormy elements of nature. FULTON, as a man of GENIUS, is remembered as one of the great men of the universe, while his opposers are silent and forgotten.

Thus far, I have spoken of the physical and mechanical sciences only, involving the chemical properties of material substances, and the general operations of nature. I now come to those that relate to the improvement of the mind. I come still nearer home. The SCIENCE of PHRENOLOGY, so beautiful, elevating, and useful in its nature, and having so strong a bearing upon the character and destiny of man, as an intellectual, social, and moral being, and even involving the dearest interest of our race—has been, and by some still is, most shamefully abused. GALL, its discoverer, was persecuted; and SPURZHEIM, COMBE, and FOWLER have received unmerited abuse. The two Fowlers, of New York, have for years withstood the storm of opposition. Thus far, they have most successfully met and repulsed the assaults of men—won the victory—gathered new accessions of strength, and still hold the field. They are business men, who never slumber at the post of duty. They have made new discoveries and improvements; gathered an immense variety of cabinet specimens of skulls and busts, from the idiot up to the most brilliant intellect—from the cold-blooded murderer up to the melting soul of a benevolent and philanthropic Howard. They have made a righteous development of true character in the phrenological examinations of thousands of human heads have directed the anxious parent how to train up the child of his affections; have pointed out to the sighing lover how to choose a congenial spirit of companionship for life; and have poured the light of mental and moral improvement in silvery streams on the GRAND EMPIRE

OF MIND. Yet such a science as this has been called a *humbug!* and such men as these have been assailed. Their bones are worthy to repose with the great men of the universe, and their names shall live on the bright scroll of fame down to the last vibrating pendulum of time—shall live when the opposers of phrenological science shall have sunk from human remembrance.

Such has been the fate of all sciences in the infancy of their existence. The moment they were born into life, the battle-axe was raised against them, and each in succession has fought its way up to manhood. The victory in favor of truth has always been sure, and millions of sycophants in the contest have perished.

How lamentable is the consideration, that there are those in this day of light, who, regardless of the warning voice of past generations, coming up from ten thousand graves, still shut their ears and close their eyes—and even sacrifice principle, to keep popular with those on whom they depend for a momentary fame. But they are not the men whose names will stand imperishable in the annals of history, to be handed down to future generations. They are destined to perish from human remembrance, and not a trace of them be left on earth.

I would not be understood as dissuading you from the pursuit of true fame. I do not despise its noble glory; but am fully sensible, that of all characters ever formed and sustained by human beings, that of true fame stands unrivaled and supreme on the page of history.

Though man is mortal, and his present existence ephemeral, yet during the short span of three-score years and ten, to what a transcendent height in the cultivation of his powers is he capable of soaring! True, his station is humble, yet he who, with an unstained hand, has honorably grasped the meed of righteous fame, has clothed himself with power, has wreathed his brow with undying laurels, and invested himself with the true majesty of his nature. Fame has been alternately assigned to the hero, the statesman, the philosopher, astronomer, theologian. But fame is not confined to any rank or pursuit in life. It can only exist in the breathings of righteousness. The philosopher and astronomer, though chained down to earth by the law of gravitation, and tabernacled with the worm, may feel within a stirring greatness that allies them to higher intelligences in future worlds, and that bids them bear their brow aloft. They may station themselves on a mental elevation above the world, and lift their towering heads to the stars. From this pinnacle of glory, they may range in loftiest thought the universe of God and even struggle to grasp the unbounded empire over which Jehovah reigns, with all its moving worlds, and yet, if this be all, true fame does not lie here. It is not the birthright of the philosopher or astronomer, unless they are in possession of something more than intellectual power.

True fame is not the birthright of the hero. The blaze of glory that has for ages encircled his head, and with its brilliancy so long dazzled the world, is beginning to grow dim. The laurels that decorate his sullen brow have been gathered at the cannon's mouth, from a soil enriched with human gore, and watered by the tears of bereavement. That fancied pinnacle of glory on which he proudly stands, has been gained by conquest and slaughter. His way to it lay over thousands of his fellow-creatures, whose warm hearts had ceased to throb; and the music that followed his march, was the widow's moan and the orphan's wail. True fame does not lie here. It sounds not in the cannon's roar, the clashing steel, the rattling drum, nor in the frightful crash of resounding arms! It is not heard in martial thunder. It is not seen in villages on fire, nor in Moscow's conflagration—that ocean of flame! True fame breathes not in the deep-heaving sigh of despairing love, nor draws its immortality from dying groans on fields of war. It has a higher origin—a nobler birth—a more elevated aim. True fame consists in the LOFTY ASPIRATIONS AFTER INTELLECTUAL AND MORAL TRUTH · and when these are found and cherished, that so deep will be the convictions of duty, sustained by sterling honor, that no popularity—no bribes of wealth and splendor—no fear of frowns, nor even the hazard of life exposed to wasting tortures shall deter that man from expressing and maintaining such truth. He who does this, possesses true and righteous fame.

Should the scoffers of rising science challenge me to produce such an example of true fame ever being set on earth, I would point them to one perfect specimen on the sacred page. I would point them to the SON OF MAN, in the majesty of whose virtues, honor, and firmness in proclaiming truth, language is impoverished, all human description fails, and the living light of eloquence is darkened forever

LECTURE III.

LADIES AND GENTLEMEN:

PERHAPS I have dwelt sufficiently long upon the preliminaries of my subject. I have done so to bring distinctly before you its nature, and clearly state its incalculable importance to the human family. I have done so to remind you of the opposition, sneers, and scorns that the noblest sciences have encountered in the infancy of their being, and in all ages of the world. I have reminded you that this has been done, not by men of GENIUS, whose names are registered on the scroll of true fame, and have come down to future generations, but it has been done by that particular class of the learned who have so large a share of the love of approbation as to study public opinion, and follow it, right or wrong, and thus beg a momentary fame from the passing crowd, which is destined to expire in darkness and vanish from human remembrance, before the breaking light of truth. I have dwelt thus long upon the points so that opposition to this science may not s prise you, nor the real character of the opponent mistaken.

Having removed every obstacle that might embarrass my course, and having plenty of sea-room, I am now ready to embark in defence of one of the greatest of causes. I stand before you to lecture upon the wonderful and mysterious science of Electrical Psychology. I stand here to exhibit by tangible experiments those wonderful phenomena that cluster around it, and philosophically to defend its paramount claims to immutable truth. The successful discharge of this incumbent duty, forces upon us the necessity of ranging the universe, and summoning the vast works of earth and heaven to the bar of reason, in order to investigate their *effects*, and trace them back to their correspondent causes. You are the empanneled jury to try this cause, and I rejoice that I have the honor to argue so interesting a point before the CONGREGATED TALENT AND WISDOM OF MY COUNTRY. However skeptical men may be in relation to any thing new, yet so far as stern reality is in its nature concerned, we have this pleasing consideration, that the *unbelief* of men cannot frown truth into falsehood, nor can the *belief* of men smile falsehood into truth. Hence the *belief* or *unbelief* of mortals cannot in the least affect those truths that God has established inherent in nature, and with which his unbounded universe swarms.

I stand here to defend the electrical theory of the universe against the assaults of men, to notice the immense variety of material existences, to glance at the animated forms of living beauty, to scrutinize the chemical properties of created substances, and to pour, if possible, the light of truth on rolling worlds. Let us even venture to step back beyond the threshold of creation—venture to lift the dark curtains of primeval night, and muse upon that original, eternal material, that slumbered in the deep bosom of chaos, and out of which all the tangible substances we see and admire were made. That eternal substance is *electricity*, and contains all the original properties of all things in being. Hence all worlds and their splendid appendages were made out of electricity, and by that powerful, all-pervading agent, under Deity, they are kept in motion from age to age. Electricity actuates the whole frame of nature, and produces all the phenomena that transpire throughout the realms of unbounded space. It is the most powerful and subtile agent employed by the Creator in the government of the universe, and in carrying on the multifarious operations of nature. Making a slight variation in the language of the poet, I may with propriety say—

'It warms in the sun, refreshes in the breeze,
Glows in the stars, and blossoms in the trees;
Lives through all life, extends through all extent,
Spreads undivided, operates unspent;
Breathes in our souls, informs our mortal part,
As full, as perfect, in a hair as heart;
As full, as perfect, in vile man that mourns,
As the rapt seraph, that adores and burns;

> It claims all high and low, all great and small;
> It fills, it bounds, connects, and equals all."

It is immaterial to what department of this globe and its surrounding elements we turn our attention, electricity is there. Wherever we witness convulsions in nature, the workings of this mighty, unseen power are there. It writes its path in lightning on the sullen brow of the dark cloud, and breathes out rolling thunder. Though cold and invisible in its equalized and slumbering state, yet it is the cause of light and heat, which it creates by the inconceivable rapidity of its motion and friction on other particles of matter. It is the cause of evaporation from basined oceans and silvery lakes—from majestic rivers and rolling streams, and from the common humidity of the earth. It forms aerial conductors in the heavens, through which this moisture in vapory oceans is borne to the highest portions of our globe, and stored up in magazines of rain, and snow, and hail! It is electricity that, by its coldness, condenses the storm, and opens these various magazines in mild beauty or awful terror on the world. It is electricity that, by the production of heat, rarefies the air, gives wings to the wind, and directs their course. It is this unseen agent, that causes the gentle zephyrs of heaven to fan the human brow with a touch of delight—that moves the stirring gale—that arms the sweeping hurricane with power—that gives to the roaring tornado all its dreadful eloquence of vengeance and terror, and clothes the mid-day sun in light. It gives us the soft, pleasing touches of the evening twilight, and the crimson blushes of the rising morn. It is *electricity* that, by its effects of *light* and *heat*, produces the blossoms of spring, the fruits of summer, the laden bounties of autumn, and moves on the vast mass of vegetation in all the varieties and blended beauties of creation. It bids winter close the varied scene. It is electricity that, by its most awful impressions, causes the earthquake to awake from its Tartarean den, to speak its rumbling thunder, convulse the globe, and mark out its path of ruin.

If we turn to man, and investigate the secret stirrings of his nature, we shall find, that he is but an epitome of the universe. The chemical properties of all the various substances in existence, and in the most exact proportions, are congregated and concentrated in him, and form and constitute the very elements of his being. In the composition of his body are involved all the mineral and vegetable substances of the globe, even from the grossest matter, step by step, up to the most rarefied and fine. And, *lastly*, to finish this masterpiece of creation, the brain is invested with a living spirit. This incomprehensible spirit, like an enthroned deity, presides over, and governs through electricity, as its agent, all the voluntary motions of this organized, corporeal universe; while its living presence, and its involuntary, self-moving powers cause all the involuntary functions of life to proceed in their destined course. Hence human beings and all animated existences are subject to the same grand electrical law that pervades the universe, and moves all worlds under the superintendence of the involuntary powers of the infinite Spirit.

On this principle, it will be plainly perceived, that as man is subjected to the same common law that pervades the universe, so *electricity* is the connecting *link* between MIND and MATTER. As it is co-eternal with spirit or mind, so it is the only substance in being that mind can directly touch, or through which it can manifest its powers. It is the servant of the mind to obey its will and execute its commands. It is through electricity, that the mind conveys its various impressions and emotions to others, and through this same medium receives all its impressions from the external world. It is by electricity that the mind contracts the muscles, raises the arm, and performs all the voluntary motions of this organized body. This I will now proceed to prove.

It will be readily perceived by every one acquainted with electrical science, that if I can find an individual standing in a *negative* relationship to myself, or by any process render him so, then I, being the *positive* power, can, by producing electrical impressions from my own mind upon his, control his muscles with the most perfect ease. This is evident, because the *posi-*

tive and *negative* forces electrically and magnetically blend, are equal in power, and paralyze each other; or, on the contrary, produce motion. This great and interesting truth I will prove to a demonstration, by experiments upon ladies and gentlemen in this audience, while they are entirely awake, and in perfect possession of all their reasoning faculties. Before I proceed to produce these astonishing and even startling results, I will, in the first place, prove that ELECTRICITY is the CONNECTING LINK between MIND and inert MATTER, and is the AGENT that the mind employs to contract and relax the muscles, and to produce all the *voluntary* and *involuntary* motions of the body.

To bring this before you in the most plain and intelligible manner, I would first remark that the brain is the fountain of the nervous system, from whence it sends out its millions of branches to every part of the body. Indeed, the brain is but a congeries of nerves, and is the immediate residence of the living spirit. This spirit or mind is the cause of all motion, whether that motion be voluntary or involuntary. It wills the arm to rise, and immediately the arm obeys the mandate; while the *very presence* of this mind in the brain, even though wrapped in the insensibility of sleep, produces all the involuntary motions of the vitals, and executes the functions of life.

To establish the fact that *electricity* is, indeed, the *connecting link* between the MIND and the BODY, I would in the first place distinctly remark, that mind cannot come in direct contact with gross matter. My mind can no more directly touch my hand, than it can the mountain rock. My mind cannot touch the bones of my arm, nor the sinews, the muscles, the blood-vessels, nor the blood that rolls in them. In proof of this position, let one hemisphere of the brain receive what is called a stroke of the palsy. Let the paralysis be complete, and one half of the system will be rendered motionless. In this case, the mind may will with all its energies—may exert all its mental powers—yet the arm will not rise, nor the foot stir. Yet the bones, sinews, muscles, and blood-vessels are all there, and the blood as usual continues to flow. Here then we have proof the most irresistible, that mind can touch none of these; for what the mind can touch it can move, as easily as what the hand can physically touch it can move. Our proof is so far philosophically conclusive.

I would now remark, that it is equally certain my mind can touch some matter in my body, otherwise I could never raise my arm at all. The question, then, arises, What is that mysterious substance which the mind can touch, as its prime agent, by which it produces muscular motion? In the light our subject now stands, the answer is most simple. It is that *very substance* which was disturbed in this paralysis, and that is the nervous fluid, which is animal electricity, and forms the connecting link between mind and matter. Mind is the only substance in the universe that possesses inherent *motion* and living *power* as its two PRIMEVAL EFFICIENTS. These two seem to be inseparable, because there can be no manifestation of power except through motion. Hence MIND is the first grand moving cause. It is the *first link* in the magnificent chain of existing substances. This mind wills. This mental energy, as the creative force, is the *second link*, and stirs the nervous force, which is electricity. This is the *third link*. This electricity causes the nerve to vibrate. This is the *fourth link*. The vibration of the nerve contracts the fibre of the muscle. This is the *fifth link*. The contraction of the muscle raises the bone or the arm. This is the *sixth link*. And the arm raises dead matter. This is the *seventh link*. So it is through a chain of seven links that mind comes in contact with dead matter; that is, if we allow the creative force—the *will*—to be one link. This *will*, however, is not a *substance*, but a mere energy, or *result* of mind. To be plain, it is mind that touches electricity—electricity touches nerve—nerve touches muscle—muscle touches bone—and bone raises dead matter. It is, therefore, through this concatenation or chain, link by link, that the mind gives motion to and controls living or dead matter, and not by direct contact with all substances. Hence the proof is clear and positive, that the mind can come in contact with, and by its volition control, the electricity of the body, and collect this subtile agent with fearful power upon any part of the system.

It is evident that the mind holds its residence in the brain, and that it is not diffused over the whole system. Were it so, then our hands and feet would think, and in case they were amputated, we should lose part of our minds. If, then, the MIND, invested with ROYALTY, is enthroned in the brain—and if the mind command the foot to move, or the hand to rise, then it must send forth from its presence an agent, as its PRIME MINISTER, to execute this command. This prime minister is ELECTRICITY, which passes from the brain through the nerves, as so many telegraphic wires, to give motion to the extremities. On this principle, how easy it is to understand the philosophy of a paralysis. The nerve, as the grand conductor of the motive power, is obstructed by some spasmodic collapse, and the prime minister cannot pass the barrier that obstructs its path. In this case, the mind, as the enthroned monarch, may WILL the arm to rise, but the arm remains motionless. But remove that barrier, the agent passes, and the arm must rise. Hence it is easily seen, that all motion and power originate in mind.

I have now brought before you the connecting link between mind and matter, and through this have shown you the philosophy of the contraction of the human muscle, through mental energy. This has ever been, and still is, considered an inscrutable mystery in Physiology. Whether it is now revealed or not, is submitted to your decision. To my mind, the argument in its defence is irresistible.

Having clearly and philosophically established the truth, that electricity, in the form of nervous fluid, is indeed the connecting link between mind and *inert* matter, the question now presents itself—If the mind continually throws off electricity from the brain by its mental operations, and by muscular motion, then how is the supply kept up in the brain—through what source is it introduced into the system, and how conveyed to the brain? I answer, through the respiratory organs electricity is taken into the blood at the lungs, and from the blood it is thrown to nerves and conducted to the brain, and is there secreted and prepared for the use of the mind. It will be impossible for me to argue this point fully unless I explain at the same instant the philosophy of the circulation of the blood. As I differ also with physiologists on this point, and as I do not believe that the heart circulates the blood at all, either on the hydraulic, or any other principle, so I will turn your attention to this subject.

The philosophy of the circulation of the blood is one of the grandest themes that can be presented for human contemplation. While discussing this matter, it will be clearly made to appear how electricity is gathered from the surrounding elements, carried into the system and stored up in the brain to feed the mind with impressions. I desire it to be distinctly understood, that when I speak of the *electricity*, *galvanism*, and *magnetism* of the human system, or of the *nervous fluid*, I mean one and the same thing. But before I proceed to notice the philosophy of the circulation of the blood, and the secretion of the nervous fluid, I will first make a few observations in relation to the *nerves* and *blood-vessels*, so that I may be distinctly understood.

I have already stated, that the brain is the fountain of the nervous system, and that both its hemispheres are made up of a congeries of nerves. They both pass to the cerebellum; and the spinal marrow, continued to the bottom of the trunk, is but the brain continued. In the spinal marrow, which is the grand conductor from the brain, is lodged the whole strength of the system. From this spinal marrow, branch out thirty-two pairs of nerves, embracing the nerves of motion and those of sensation. From these branch out others, and others again from these; and so on till they are spread out over the human system in network so infinitely fine that we cannot put down the point of a needle without feeling it—and we cannot feel, unless we touch a nerve. We see, therefore, how inconceivably fine the nervous system is. In all these millions of nerves there is no blood. They contain the electric fluid only, while the blood is confined to the veins and arteries. I am well aware that the blood-vessels pass round among the convolutions of the brain, and through them the blood freely flows to give that mighty organ action; but in the nerves themselves there is no blood. They are the residence of the living mind, and its prime agent, the electric fluid.

Though I have frequently, in my public lectures, touched upon the philosophy of the circulation of the blood, and hence those remarks were reported and published in my "Lectures on the Philosophy of Animal Magnetism, in 1843," in connection with my views of the connecting link between mind and matter, yet I have never taken up the subject in an exact, full, and connected detail of argument. This I will now proceed to do in connection with the secretion of the nervous fluid.

I would, then, in the first instance remark, that the air we breathe, as to its component parts, is computed to consist of twenty-one parts OXYGEN, and seventy-nine parts NITROGEN. Electricity, as a universal agent, pervades the entire atmosphere. We cannot turn the electric machine in any dry spot on earth without collecting it. Oxygen is that element which sustains flame and animal life. Neither can exist a moment without it, while nitrogen, on the contrary, just as suddenly extinguishes both. The atmosphere, in this compound state, is taken into the lungs. The oxygen and electricity, having a strong affinity for moisture, instantly rush to the blood, while the nitrogen is disengaged and expired. The blood, being oxygenized and electrified, instantly assumes a bright cherry-red appearance, and by this energizing process has become purified and prepared for circulation. The lungs, and the blood they contain, are both rendered electrically *positive;* and we know that in electrical science two positives resist each other and fly apart. Hence the lungs resist the blood and force it into the left ventricle of the heart. The valve closes and the blood passes into the arteries. Hence arterial blood is of a bright cherry-red hue. It is by the *positive* force of electric action, propelled through every possible ramification of the arterial system till all its thousands of minute capillary vessels are charged. Along these arteries and all their thousands of capillary branches are laid nerves of involuntary motion, but no nerves whatever attend the veins. Why is this so? Why is it, that nerves, like so many telegraphic wires, are laid along the whole arterial system in all its minute ramifications, but that none are laid along the venous system? I press this question—Why do nerves attend the arteries, while none attend the veins? I answer, that nerves are laid along the arteries to receive the electric charge from the *positive* blood that rolls in them, which charge the blood received from the air inspired by the lungs. But as the venous blood is ***nega-***

tive, it has no electricity to throw off, and hence needs no attendant nerves to receive a charge—because that very electric charge, which the blood receives from each inspiration at the lungs, is thrown off into the nerves by friction, as it rolls through its destined channels in crimson streams. At the extremities of the arterial system—at the very terminus of its thousands of capillaries, the last item of the electric charge takes its departure from the positive blood, escapes into the attendant nerves, through them is instantly conducted to the brain, and is there basined up for the use of the mind.

The arterial blood, having thrown off its electricity as above described, assumes a dark—a purplish hue. It enters the capillaries of the veins, which are as numerous as those of the arteries. The blood is now *negative*, and as the lungs, by new inspirations, are kept in a *positive state*, so the venous blood returns through the right ventricle of the heart to the lungs, on the same principle that the *negative* and *positive* forces rush together. There it is again electrified and oxygenized, changed to a bright cherry-red color, is again rendered *positive*, and is thus purified and prepared once more for arterial circulation. We now clearly perceive that it is electrically the blood circulates, and electrically it recedes from, and returns to, the lungs through the two ventricles of the heart. The heart does not circulate the blood at all, as physiologists contend. The heart is the SUPREME REGULATOR of this sublime and constantly ebbing and flowing OCEAN of crimson life, with all its majestic rivers and frolicking streams, and determines with exactness how rapidly the whole shall flow.

LECTURE IV.

LADIES AND GENTLEMEN:

I HAVE in my last Lecture touched upon the philosophy of the circulation of the blood, the nervous system, and the secretion of electricity upon the brain, which I call the nervous fluid. As this part of my subject must, on account of its importance, possess peculiar interest to us all, I desire to dwell upon it a few moments longer.

From the arguments already offered, it will be clearly perceived by every philosophic mind, that the circulating system is in reality *two* distinct systems. The *first* is the ARTERIAL SYSTEM, that carries the *positive blood*, which is, as before stated, of a bright cherry-red color, and is ever flowing from the heart to the extremities. The *second* is the VENOUS SYSTEM, that carries the NEGATIVE BLOOD, which is of a purple color, and is ever flowing from the extremities to the heart. To these two circulating systems, the heart, with its two auricles, two ventricles, and valves, is exactly adapted, so as to keep the *positive* and *negative* blood apart, and to regulate the motion of both

And it will be perceived that the nervous system most perfectly corresponds with what I have said of the circulating system. I mean that nerves of involuntary motion are laid along the arteries to receive the charge of electricity from the *positive* blood that flows in them. These views of the circulation of the blood are strengthened by the fact, that the blood contains a certain portion of iron; and we well know that iron becomes a magnet only by induction, and loses its magnetic power the moment the electric current passes from it. Hence the blood, through the agency of the iron it contains, can easily assume a *positive state* at the instant it receives the electric charge from the air at the lungs. It can then pass into the arteries, and by friction throw off its electricity into the nerves, and again assume a *negative state* as it enters the veins.

I now consider the ELECTRIC OR MAGNETIC CIRCULALATION of the blood philosophically and irresistibly proved. Hence the position which many assume, that the heart circulates the blood on the hydraulic or vacuum principle, is utterly unfounded in truth. And that the heart, in accomplishing this, exerts a force, as they contend, of more than one hundred thousand pounds, is too preposterous to be believed. I grant that the heart is the strongest muscle in the human system; but who can for one moment believe that its motive power is equal to fifty tons? The heart, as I have already observed, does not circulate the blood at all; nor on the contrary does the blood cause the heart to throb. The heart and lungs both receive their motions from the cerebellum, which is the fountain and origin of organic life and involuntary motion. Hence the involuntary nerves from the cerebellum throb the heart and heave the lungs, and the electricity contained in the air they inspire, circulates the blood and supplies the brain with nervous fluid, as I have already explained.

Perhaps, however, the inquiry may here arise, What proof is there that the involuntary nerves from the cerebellum throb the heart and heave the lungs, and that the blood is not made to circulate from the same cause?

This double interrogatory is easily answered. Insert, for instance, a surgical knife between the joints of the vertebræ, and cut off the spinal marrow below the lungs and heart—all the parts below this incision will be so completely paralyzed, and voluntary motion and sensation so entirely destroyed, that we have no power to move the limbs by any volition we may exert; nor have we any power to feel, even though the paralyzed limbs should be broken to pieces by a hammer, or burned with fire. Yet in these immovable and unfeeling parts the blood continues to circulate as usual through the veins and arteries. This is proof positive that the blood is not made to flow by any power whatever invested in the cerebellum, but, as before proved.

by the *positive* and *negative* forces of that electricity contained in the air inspired by the lungs. But let the spinal marrow be severed above the lungs and heart, and both will be instantly paralyzed and cease their motions ; yet the last inspiration taken in by the lungs will cause the blood to circulate till it floods the right ventricle of the heart with venous blood, and empties the left ventricle of its arterial blood. This is proof the most irresistible, that the HEART AND LUNGS ARE MOVED BY AN INVOLUNTARY NERVOUS FORCE ORIGINATING IN THE CEREBELLUM, while the blood is circulated by the *positive* and *negative* forces of that electricity which is taken in with the air at the lungs. The lungs merely act as a double force-pump to bring in the surrounding atmosphere, extract from it a proper supply of the vital principle to feed the bright and burning flame of life, and to reject and expire the dregs unfit for that end. This is perhaps as much as it is necessary to say in relation to the circulation of the blood, and the constant secretion of the nervous fluid from the arterial blood to the brain. I now turn to the philosophy of disease, and will be brief as possible.

It is generally supposed by medical men, that there are innumerable causes for the various diseases in existence, and that even one disease may have many causes in nature to produce it. But I contend, that there is but one grand CAUSE for all diseases, and this is the disturbing of the vital force of the body. There is in every human being a certain amount of electricity. This is, as I have said, the most subtile and fine material in the body; is the power, as has been shown, that moves the blood; and is the agent by which the mind, through the nerves, contracts the muscles and produces motion. And as all the convulsions and operations in nature and in man invariably begin in the invisible and finest substances in being, and end in the most gross, so electricity, in the human system, is the cause of all the effects there produced, whether salutary or otherwise. When this electricity is equalized throughout the nervous system, the blood will also be equalized in its circulation, and the natural result is health. But when it is thrown out of balance, the blood will, in like manner, be also disturbed, and the natural result is disease; and the disease will be severe or mild in the same ratio as the vital force is more or less disturbed.

I am well aware that medical men are much inclined to examine the patient's pulse, and watch the movements of the blood. They seem to think that nearly all diseases originate in the blood, and hence, under this impression, hundreds of specifics, or nostrums, have arisen to purify the blood, as though it contained some foreign properties that rendered it impure, and that these, by some medical treatment, must be extracted or removed from the system. But all this is fallacious, as the blood contains no foreign properties to render it impure. The blood becomes impure only through a disturbed circulation. It can be purified by no other substances in being, except what are contained in the air at the lungs. These are oxygen and electricity. The whole blood in the body must, every few moments, be passed through the lungs to be purified and preserved from putrefaction. If the circulation, in any part of the body, be obstructed, or thrown out of balance, so that the blood cannot pay its timely visit to the lungs, it must become extravasated and impure. If, in any part of the body, there is a complete obstruction, so that the blood is entirely retained, then inflammation, ulceration, and corruption must ensue.

I now turn directly to the subject, and call your undivided attention to the philosophy of disease. The operations of the mind, and the nervous system of man, have been too much overlooked by medical men, who have paid great attention to the blood, and to the more gross and solid parts of the body. But it is evident that disease begins in the electricity of the nerves, and not in the blood. Electricity is the starting point. From thence it is communicated to the blood, from the blood to the flesh, and from the flesh to the bones, which are the last effected. It begins in the finest, and ends in the grossest particles of the system. The unseen are the starting powers.

I have already remarked that the brain is the fountain of the nervous system, and sends forth its millions of branches to every possible part and extremity of the body. This nervous system is filled with electricity, which is the agent or servant of the royal mind, who, as monarch, holds his throne in the brain. From thence the mind, by its volitions, controls one half of the electricity of the system. It controls all that is contained in the voluntary nerves, but has no such control over the other half, which is confined to the involuntary nerves.

Though there is but one grand cause of disease, *which is the electricity of the system thrown out of balance*, yet there are, nevertheless, *two modes* by which this may be done. It may be done by mental impressions. And so it may be done by physical impressions from external nature. I will first notice how diseases are produced by *mental impressions.*

Millions of our race have been swept from the light of life to the darkness of death by various diseases caused by mental impressions. Misfortune and distress have fallen upon many a father, a mother, and many a child. They have shut up in their bosoms all these mental woes, and brooded over their misfortunes in secret, concealed grief. Melancholy took possession of the heart, the vital force was disturbed, the system was thrown out of balance, disease was engendered, and they went to their graves.

I am now addressing this audience. The action of my mind has called the electricity of the system from the extremities to the brain. The blood has followed it. My feet being robbed of their due proportion of the vital force, are, in the same ratio, cold, and hence, this is, so far, disease. And unless I ceased speaking, and suffered a reaction to take place, it would bring me to my grave.

A man accumulates a fortune of two hundred thousand dollars. He loses one half of it, and is hurled in distress. He broods over his misfortune. The mind is in trouble; it shrinks back on itself. The electricity of the system, this servant of the mind, leaves the extremities and approaches the brain, the throne of the master. The blood follows on; the excitement becomes great, and he believes he shall die in an almshouse. He is a monomaniac. Suppose he now loses the other half of his fortune, and his mind will become involved in still greater distress. This mental action calls an increased quantity of electricity, that is, of nervous fluid, to the brain, and an equal amount of blood follows on. He is now entirely deranged, and his feet are incessantly cold, because the brain has robbed them of their due proportion of the vital force. Now do you not perceive, that if these forces are dispersed from the brain, and the circulation equalized, that his reason will be restored? There is not too much of blood and electricity in the system, but there may be too much in any one department of the system. I will now suppose him once more in possession of his reason. Now bring him intelligence that his darling child is crushed to atoms. The mind suddenly shrinks back on itself; the electric, or nervous fluid, instantly darts to the brain, like a faithful servant to see what distresses the master. The blood as suddenly follows the servant. The storm rages, and a fit ensues. Let the news be still more startling, and the congregated forces will, in the same ratio, be increased upon the brain, and he drops a corpse! So we perceive that, in all these instances, there is but one cause of disease. The only difference we have witnessed in the effects produced, was a gradually increased action, occasioned by an increased power of the same cause, even from the slightest excitement, gradually up to that fearful point where it produced instant death. An instance analagous to this, transpired here among you, in the case of the distinguished statesman, John Quincy Adams. Perhaps too much anxiety and thought for the welfare of his country, at his advanced age, called the forces to the brain, and the brilliant lamp of reason and life was extinguished! He has entered on other scenes!

I have thus far confined my remarks to effects produced upon the brain by the electro-nervous fluid and blood, which were called there by the various emotions, passions, and sensations of the mind. But that these forces should invade the territory of the brain, and produce such results, depends, however, upon the condition of the brain as to its comparative physical strength with the other parts of the system. In this view of the subject, had the same misfortunes as to loss of property above stated been visited upon this same individual when his brain was firm, a different disease would have been the result. Suppose that his brain, as to its physical structure, had been strong and firm, but that his lungs had been weak. Now let the same misfortunes befall him. His mind again shrinks back on itself; the electro-nervous force, as before, starts for the brain, but is not allowed to enter this palace of the distressed monarch, and it stops at the lungs, the weakest and nearest post. The blood next follows on in pursuit of the servant, and takes up its abode with him. Inflammation sets in, and, if the trouble of the monarch continues, tubercles form, ulceration takes place, and death ensues. It was consumption.

But suppose the lungs had been strong, and that the stomach had been, by some trivial circumstance, rendered the weakest part. The electro-nervous fluid and blood would, in this case, have gone there, and taken possession of that post. Inflammation, canker, with morbid secretions would have ensued, and even ulcers might have been formed. The digestive organs would have been weakened, and dyspepsia, with all its horror of horrors, would have been the result. If the liver had been the weaker spot, the same forces, under the same mental impressions, would have congregated there, and produced the liver complaint. If the stomach and liver had both been strong, and the spine weak, it would have been a spinal complaint. If all these had been physically firm, and the kidneys weak, the same forces would have produced a disease of the kidneys. And if all in the regions of the brain and trunk had been firm, and a mere blow had been inflicted upon the hip, knee, or any part of the lower limbs, the electro-nervous force and the attendant blood would have gone there, and produced the white swelling, or any other species of inflammation and distress. So we perceive, that the same CAUSE, under MENTAL IMPRESSIONS, may produce any of these diseases. As to the character of the disease, it merely takes its name from the organ or place in the body where it may locate itself. Hence diseases differ one from another only as the various diseased organs, their motions, secretions, and functions may differ—or as the various located parts of the body invaded by disease may differ from each other. But the producing CAUSE of all these diseases is one and the same. It is the ELECTRO-NERVOUS FLUID of the body.

Having said all that I at present deem necessary in relation to the disturbing of the nervous force by MENTAL IMPRESSIONS, I will now turn your attention to the disturbing of the nervous force by PHYSICAL IMPRESSIONS.

As the mind in distress—in secret melancholy and grief—has disturbed the nervous force, which has engendered disease by calling the blood and other fluids of the body to its presence, and thus sent millions to their graves—as it has produced all the diseases we have mentioned and even hundreds more—so the same diseases and hundreds more are also produced by the nervous force when it is disturbed by *physical impressions* from external nature.

I am well aware that *mental* and *physical* impressions may be termed *causes* of disease; but it will be remembered, that medical men contend that there are *remote* and *proximate* causes of disease. I am on the latter, and contend that there are not thousands of *proximate* causes, but only *one* grand PROXIMATE CAUSE of disease, and this is the disturbing of the nervous fluid, or throwing the electricity of the system out of balance; and that diseases begin in the electric force of the nerves, and not in the blood. They begin in the invisible and finest substance of the body, and end in the gross. Hence the same cause that produces monomania, produces entire derangement, fits, headache, and even the common excitement of the brain in a public speaker. The same cause produces consumption, dyspepsia, liver complaint, spinal affections, pleurisy, cholera, dysentery, inflammations, fevers, etc. This subtile, *disease-causing* principle, is the ELECTRO-NERVCUS FLUID. When equalized throughout the system, it is the cause of health, for it controls the blood and other fluids, and when thrown out of balance, it is the cause of disease. Hence the minister of health and sickness—of life and death—is within us, and is one and the same principle. As electricity is the efficient cause of all convulsions, calms, and storms in nature, and of all the pleasing or awful phenomena that transpire in earth, air, or ocean, or in the vegetable or mineral kingdom, so, as man is but an epitome of the universe, it is electricity in the form of nervous fluid that produces all the convulsions, calms, and storms in his own system.

We have seen the various secret stirrings of electricity in the human nerves under *mental impressions*, in producing insanity, fits, consumptions, etc. We witness the same mournful results when that subtile power is moved by *physical impressions.* A wet foot, for instance, may throw the electro-nervous fluid out of balance, and this subtile force may suddenly check the lacteal or other secretions, and also produce insanity, or fits, or by locating itself upon the lungs, it may produce consumption. The fact is, that the electro-nervous fluid, when disturbed at the extremities, or on the surface of the body, always retires inward, and locates itself upon the weakest organ, or upon some weak portion of the vitals—the blood follows, and disease is the result. As I have fully explained this when noticing mental impressions, so there is no occasion of my par ticularizing. I will merely say, that a sudden exposure to a damp air, sitting upon a cold rock, lying upon the ground and suddenly falling asleep, or sitting with the back to a current of air while in a perspiration—all, or any of these, may at times disturb the electro-nervous force, and arouse this *disease-causing power* from its slumberings. This may throw the blood out of balance, and by locating themselves upon the weakest organ or weakest part of the system, engender disease. Or the nervous force may be disturbed by eating or drinking too much or too little of wholesome substances, or by eating and drinking unwholesome or poisonous substances, and all these correspondent diseases produced.

It is now clearly seen how *mental* and *physical* impressions disturb the electricity of the system, which locates itself upon the weakest organ, calls the blood to its aid, and brings disease, pain, and death. So we perceive, that the same nervous fluid which, when equalized, produces health, is, when thrown out of balance, the cause of disease. The whole electricity of the nerves is, of course, one hundred per cent. Fifty per cent. is under the voluntary control of the mind, and belongs to the voluntary nerves, and the other fifty per cent. is under the control of the involuntary powers of the mind, and belongs to the involuntary nerves. Now if the whole fifty per cent. of either of these forces, which when equalized is health, should be suddenly collected upon any one organ, it would be the destruction of that organ. If the mind, on hearing bad news, or by some sudden distress, should call the whole fifty per cent. of electricity under its control to the brain, apoplexy and death must ensue. This would be done by a *mental impression* on the voluntary nervous force, causing the mind to shrink back on itself and become passive. But the same melancholy result could be produced by eating, drinking, or some other *physical impression* on the involuntary force over which the mind has no such control. Hence it will be understood, that all diseases, originating under mental impressions, are produced by the fifty per cent. of voluntary nervous force. But those diseases, originating under physical impressions, are produced by the fifty per cent. of involuntary nervous force, and over which the mind has no control.

If either of these electro-nervous forces, to a certain amount, should be called to a muscle, it would be pain. If called to a still greater extent, it would be inflammation; and if the whole fifty per cent. were called there, it would be mortification, and the ultimate and absolute destruction of the muscle. The same result would follow in case either of these forces were called to any organ in the system. It would be the destruction of that organ.

There are three kinds of pain: *First*, a pain produced by negative electricity, which attracts the blood to the spot, and is ever attended with inflammation.

Second, a pain produced by positive electricity, which repels the blood, and, though equally severe, is never attended with inflammation. *Third*, a pain produced by the confused mixture of the two forces, and consists in a burning, itching, or prickly sensation, and is often very distressing.

I have now given you a few hints on the philosophy of disease, which are of course novel to you all; but they are, nevertheless, as interesting and important to the welfare of our race, as they are novel and strange. Medical men have ever noticed the great effect that the mind has upon the body, both as it regards a disastrous or salutary result. Hence they keep up the brightest hopes of their patients as to recovery, and carefully guard every one against uttering to them a word of discouragement. These effects they have seen, but not understanding the connecting link between mind and matter, the true philosophy of disease has been by them entirely overlooked, and in relation to this science they may after all cry "*humbug*." But this will avail them nothing, for truth, after all, will stand unshaken, and be appreciated by after generations, when opposition shall have been interred, with no hope of its resurrection. In view of our subject, so far as it regards mental impressions, we see the supreme importance of maintaining a reconciled state of mind. Equanimity of mind is the parent of health, peace, and happiness and the noblest test of the true Christian. When we see thousands always restless, complaining of cold and heat, and wet and dry—complaining of their own condition, and finding fault with others, and dissatisfied with the events of Providence—we need not marvel that so many complain of indisposition and disease. This state of mind produces them. So beware.

LECTURE V.

LADIES AND GENTLEMEN:

WHEN we reflect how extensive a field the philosophy of disease naturally occupies, and how vast a range we must take in order to inspect minutely its several parts, it will then be seen that my remarks, in my last Lecture, have been brief in comparison with the vastness of the subject. I flatter myself, however, that my views are understood, and that the importance of the doctrine of mental and physical impressions, in relation to disease, is clearly seen, and fully appreciated by you all. I believe it to be founded in immutable truth, and that it will survive the crush of empires and the revolution of ages.

Having brought forward the PHILOSOPHY OF DISEASE in my last Lecture, I now turn to the RATIONALE OF ITS CURE in this.

In discussing the doctrine of mental impressions, I have clearly and irresistibly proved that the mind by shrinking back on itself in fear, melancholy, and grief, in the day of adversity, misfortune, and distress, can disturb the electro-nervous fluid, and allow it to concentrate itself upon any organ of the body and engender disease. If, then, the mind can disturb the equilibrium of the nervo-electric force and call it to some organ so as to produce disease, then the mind can also disperse it, equalize the circulation, and restore health. This it can do by a mental impression, admitting the impression to be sufficiently great. For example: A man in possession of five thousand dollars is riding homeward on horseback in the evening. He is within a mile of his house. He is weary and his head aches so severely that he is obliged to walk his horse. He is so indisposed and faint that he can but just keep his saddle. From a lonely dismal spot at the road side, a robber springs and seizes his horse's bridle—presents a pistol, and exclaims, "Your money, or your life!" The rider, with a loaded whip, and at the impulse of the moment, suddenly strikes the robber's arm. This causes the pistol to discharge, and adds to the confusion of the moment. The rider, scarcely knowing what he is about, puts spurs to his horse. He darts off at the top of his speed. Before he is aware, he is at his own door. He dismounts and finds himself safe. The vital force is driven to the extremities, and his hands and feet are warm. Where is his headache now? It is gone. The supreme impression of his mind drove the electro-nervous fluid from his brain—the blood followed it—a reaction took place, and he was well. Is there any thing strange in this?

No. Then there is nothing strange in this science, for it is the curing of diseases by the doctrine of impressions.

I desire it to be distinctly understood how this power operates. Remember mind touches the electro-nervous fluid, moves it—and this fluid moves the blood. Electrical Psychology is the doctrine of impressions, and the same disease that mind, or even physical impressions can cause, the mind can remove, if the patient be in the psychological state. Because mental impressions to any extent we please can be produced upon him. It is therefore immaterial from what source a disease may arise, or what kind of a disease it may be, the mind can, by its impressions, cause the nervous fluid to cure it, or at least to produce upon it a salutary influence. If exposure to heat or cold, dampness or dryness, or to any of the changing elements, should call the nervous fluid to the lungs, and disturb the circulation of the blood, so as to produce inflammation, the mind could disperse and equalize it, and thus effect a cure as readily as though this inflammation of the lungs had been brought on by melancholy and grief, or by any other mental distress. Or if these exposures had caused any other disease or pain in the system, the mind could have had the same power to remove it, as though it had been caused by mental distress. Or if by eating, drinking, or by sedentary habits, dyspepsia had been produced, the mind could have had the same power to produce a salutary result, or even to cure it as though it had been caused by mental distress. I do not mean that a cure can be effected by the electro-nervous force, *through mental impressions*, if there be any organic destruction of the parts diseased. The consumption, for instance, could not be cured if the lungs were ulcerated; sight could not be restored if the optic nerve were destroyed; nor could deafness be removed if the auditory nerve were destroyed. In these cases, even, medical remedies, it must be granted, would be of no avail, because there is no foundation on which to build. In all I have said, or may say in regard to cures, I have reference only to curable cases. I mean, that the fifty per cent. of electro-nervous force, under the control of the mind, could effect a cure where there is no organic destruction, and where there is, at the same time, a sufficiency of vital force left to build upon, so as to be able to produce a sanative result. Nor do I mean to be understood that this science alone can at all times cure. It may require medicines to co-operate with it. As diseases are produced through mental and physical impressions, so through mental and physical impressions they must be cured.

Medicine produces a physical impression on the system, but never heals a disease. If a disease were ever healed through medicines, it was healed by the same sanative power as though it had been done by a mental impression in accordance with the teachings of Electrical Psychology. This is evident; because the sanative power is in the individual, and not in the medicine. Medicines and mental impressions only call that sanative principle to the right spot in the system so as to enable it to do its work. The following example will explain my meaning on this particular point:

You enter a garden and see a peach-tree with its fruit not fully grown, but so heavily laden, that one of its limbs is partially split from the trunk. The gardener is aware that if it be neglected till the fruit grows to maturity, the limb will be entirely parted from the tree and die. He carefully raises the limb till the split closes, and puts under it a prop to keep it to its place. He winds canvas around the wounded part, and over this he puts tar. Now there is certainly no healing principle in the prop—there is none in the canvas—nor is there any in the tar. The prop merely sustains the weight of the limb, and keeps the split together; the canvas is wound around it to prevent the tar from entering the split; and the tar was applied to protect the whole from the air, rains, and external elements; while the tree is left to the *inherent operations of its own sanative principles.* The sanative principle being in the tree, it must heal itself. So the healing principle is in man, as much so as it is in the tree. The healing principle in the tree is the *invisible electro-vegetative fluid.* This moves and equalizes the sap, and the sap affects the wood. It is the electricity of the tree that does the work; and this electricity is under the control of its vegetable life. So the healing principle in man is the *invisible electro-nervous* fluid. This moves and equalizes the blood, and the blood affects the flesh. It is the electricity of the system, under the control of the mind.

The position is incontrovertible, that the healing principle is in man. Admitting it to be electricity, or what I call the electro-nervous fluid of the system, it is then easily seen that there is no healing principle in medicine, and it is also understood what effect medicine must have upon the system in order to produce a salutary influence. It must equalize the electricity, as before remarked, and call it to the proper spot, so as to enable it to do its healing work. Hence, if the mind can so operate upon the fifty per cent. of the electro-nervous force under its control, as to equalize it, then it follows, as a matter of course, that the same healing result will be obtained as is effected by medicine. In either case there is no difference in the healing power. In both instances it is the same. The only difference is, that in the one case the healing power was made to act by the mind, which produced its *mental* impression, and in the other case by the medicine, which produced its *physical* impression.

It may now be asked, If medicine has no healing property in it, then how can an emetic remove impurities from the stomach by vomiting the patient? In reply I would state, that it has never done so. In this I desire to be distinctly understood. I mean that an emetic is not the vomiting principle. The vomiting principle is in the man. It is the electricity of the system. The electro-nervous fluid of the brain is the vomiting principle. Let us understand the philosophy of this. Emetics, whether *mineral* or *vegetable*, possess those peculiar chemical properties that cause immense secretions. This effect is the whole secret of their power. An emetic, taken into the stomach, produces secretions most freely from the glands of the stomach, from the mucous membrane of the lungs, from the glands of the trachæ, and from the glands of the mouth and tongue. It robs them of their moisture which is continually accumulating upon the stomach. The parts being robbed of their moisture by this artificial action, the electricity from the nerves follows it, because electricity has a strong affinity for moisture. When a sufficiency of the electric force is drawn from the brain, and the blood having in the same ratio followed it, the countenance becomes pale—an expansion and collapse of the stomach takes place, and vomiting is the result. This is its philosophy. In proof of the fact, electricity cannot be gathered in damp weather. The moisture, for which it has a strong affinity, holds it.

After all I have said of medicine and its operations, it may yet be supposed that it possesses some healing principle, and that the emetic does vomit the patient. Why then will it not vomit a dead man? The answer is, because the vital force is gone, and the emetic is powerless. But why will it not vomit the man when he is worn out with disease and near his end? I answer, because the vital force in the man, on which vomiting depends, is wasted; and as it does not exist in the medicine, so the emetic, in its chemical action having no material to work upon, or to call to its aid, is powerless.

If this is not satisfactory to your minds in the settlement of the question whether the vomiting principle is in the medicine or in the patient, I will pursue the subject still farther. Suppose while eating strawberries and cream, you tell a sensitive lady that she has taken into the stomach a worm, or even a fly—she stops eating, and in a minute she vomits freely. How is this, when she has swallowed, in fact, neither worm nor fly? I answer, that the vomiting principle is in the brain. She believed that she had taken into the stomach what was stated; she kept her attention steadily and most intently upon it—and the mind threw the electro-nervous force from the brain to the stomach, until there was a sufficient quantity to produce an expansion and collapse of the stomach, and cause vomiting. Now the vomiting in this case and in the case of the emetic was occasioned by one and the same thing, and that is the electro-nervous fluid. The only difference in the two cases is, that the emetic called it from the brain by a *physical* impression, and the mind forced it from the brain by a *mental* impression.

If the vomiting principle is not in us, why then does it turn the stomach to see an animal eating any thing very filthy, like the dog returning to his vomit? If this principle is not in us, how can it produce nausea? How can the motion of a vessel, and sometimes even the motion of a carriage, produce vomiting, unless it exists in the nervous force of the brain? Why will a fall, or blow upon the head, produce it.

The same is true in relation to cathartics, which excite the secretions of the glands, but of other glands than those affected by an emetic. A cathartic excites the secretions of the mucous glands of the alimentary canal. This draws the electric action from the brain, but mostly from the nerves on the surface of the body there, and produces its results. I have been thus particular upon the action and operation of emetics, as this one hint is sufficient to lead any reflecting mind to a correct impression of the relation in which medicines stand to the human system. They are the mere props and supports of some weak part, to aid nature in restoring herself to health and vigor. A cathartic, taken into the stomach of a very sensitive individual, will produce the result of an emetic; and an emetic, too long in effecting its end in the first stomach, will, after passing the duodenum, produce the result of a cathartic in the second stomach.

I have now said all that is necessary in relation to the curing of diseases by the ELECTRO-NERVOUS FORCE, and have clearly shown how this force can be made to act by mind, or by medicine. I will now give advice in relation to avoiding disease and preserving health, which it will be well for every one to observe who is desirous of securing this inestimable blessing. As life is dear to all, I shall be pardoned when I say that medical gentlemen are mad who administer medicine in silence to the patient without candidly informing him what the medicine is, and what effect or effects he intends it to produce. If the patient were thus instructed by a physician in whom he had full confidence, then he would be in constant expectation of the anticipated effect; and the mind, by its mental impressions, acting in concert with the physical impressions of the medicine, would produce a salutary and happy result. I grant that this information cannot be given to infants, nor to deranged persons; but it should be done in all possible cases.

In order to preserve health, *the body should be kept clean, and the mind pure and calm.* There are extremes in every thing, and these should be carefully avoided. The body should be carefully washed all over, or bathed, except the head, in water moderately cool. No soap should be used in either case, and the process should not occupy more than *three* or *four* minutes. It should be briskly rubbed with a coarse towel, and mostly downward, so as not to disturb the minute scales that cover the pores. In cold weather, colder water should be used than in moderate weather. Indeed, the water should be about the temperature of the elements. But in freezing weather the body should be merely immersed, and almost immediately extricated, and the washing process should not occupy more than a moment of time. In cold weather, twice per week is sufficient; and in warm weather, every alternate day is abundant, in ordinary cases. Too frequent washings and bathings, and of too long continuance, to persons in ordinary health, is deleterious, as it destroys too much of the natural oil of the skin, which the Creator has supplied to give it a soft and silky texture. The system of hydropathy has great force, if rightly managed. In cases of heat, or inflammation, warm water should be applied, and the reaction would be coolness; and in cases of cold feet, they should be washed on going to bed each night in cold water, till they remain continually warm. The coldest water will extract the frost from a frozen hand, whereas if it were immersed in the warmest water that could be borne, it would perhaps destroy it, so as to render even amputation necessary. But if the hand be burned or scalded, immersing it in the warmest water that can be borne, or holding it to the fire, will produce a salutary result, even though the remedy be a harsh one. On this principle, you see the inconsistency of cold water applications, and even of ice to the head in brain fevers, or where there is a severe inflammation of the brain, occasioned by a fall, a blow, or any concussion.

I now turn the attention of ladies and gentlemen to eating, drinking, and wearing apparel, and will endeavor, in few words as possible, to show the bearing of these upon the human constitution.

Our bodies are made up of the elements, and, as I have already observed, are an epitome of the universe. In order to insure perfect health, we should subsist entirely upon the provisions, whether vegetable or animal, that are produced in that part of the earth where we were born and reared, or in that part of the earth where we intend to spend our days. And, moreover, our wearing apparel should also be the product of the same section where we live. Cotton should never be worn where the snow covers the earth, or in that part of the earth's latitude where it cannot be raised. Hemp, flax, cotton, wool, and silk may be worn with perfect safety in those latitudes of the earth's surface where they can be cultivated. The Creator's works are perfect. He has established complete harmony between the vegetables, and the soil where they grow, and the climate that fostered their existence and warmed them into life. He, therefore, who eats the food belonging to his own latitude, who drinks the water that gushes from his own springs, and wears the clothing produced in his own climate, establishes a perfect harmony and aptitude between his own body and the surrounding elements. I mean that he does this in case he uses these blessings temperately, as not abusing them.

The truth of this will appear perfectly clear, if we have a correct understanding of inuring ourselves to another climate, entirely different from the one to which we have been accustomed. I will therefore call your attention to the PHILOSOPHY OF BECOMING ACCLIMATED.

The mineral kingdom lays a foundation for the vegetable, and the vegetable for the animal kingdom. It is therefore perfectly clear that no animals could have had an existence till there were vegetables, because an *animal* is but a *vegetable* of the *second* growth. Each latitude of the globe has vegetables peculiar to itself, and these make up all the varieties that exist on earth. But the same species of vegetables differ from each other in different latitudes, as far as the climates and elements or soils may differ from each other. An apple, pear, or peach, grown in forty degrees north latitude, differs considerably from the same fruit raised in thirty degrees north latitude. This is certain, because it is the result of surrounding elements that gave it being. The same may be said of corn, wheat, and rye in different latitudes. And as animals are but vegetables of the second growth, hence the same animals vary in accordance with their latitudes. The beef, mutton, and pork, raised in thirty and forty degrees north latitude, are therefore unlike, each being adapted to its own climate and the vegetables that sustained them.

I have already stated, that our bodies are made of the water, the vegetables, and animals upon which we subsist, and are adapted to the climate and surrounding elements where we were born and reared. Our bodies are continually wasting away, and by food and drink are continually repaired. We lose the fleshy particles of our bodies about once a year, and the bones in about seven years. Hence in seven years we have possessed seven bodies of flesh and blood, and one frame of bones. We have not now, in all probability, a particle of flesh and bones we had seven years ago. The water we have drank, and the flesh and vegetables we have eaten, having made up the component parts of our bodies, cause us to hanker and long for the same substances of which our bodies are composed. Like substance in us calls for like substance without, to supply the waste of the system. This is habitude.

Now suppose we suddenly change our climate from forty to thirty degrees north latitude. The air, water, fruits, vegetables, and flesh all differ. The old particles composing our bodies, and brought from forty degrees north latitude, fly off as usual. This produces hunger and thirst, and we supply our wants by the water and food of thirty degrees north latitude, and continue for weeks to do so. This creates a conflict between the old substances of our bodies and the new flesh and blood continually forming, throws the electro-nervous force out of balance, and engenders disease. If we live and struggle on, for about seven years, we become ACCLIMATED, because our old flesh and bones, formed by the substances of one latitude, have disappeared, and our entire systems are made up of the substances of another latitude. Hence we see the danger of changing our positions on the globe to any great extent, which may, however, in some instances, prove beneficial to the constitution. Such is the PHILOSOPHY of being ACCLIMATED.

In view of what I have now brought forward, it will be clearly perceived, by ladies and gentlemen, that we should confine ourselves to the water, fruits, grains, and animal food, and even to the medicines produced in that climate where we live, and reject those of distant latitudes and foreign climates. To drink tea and coffee, and eat oranges, lemons, citrons, pineapples, and the productions of all parts of the globe, is like changing, in some measure, our climate for another, or for several others, and thus keeping up a continual conflict between the elementary particles that are constantly entering the composition of our bodies. There is an incessant war waged between the climate where we live, and the productions of another region, and those of our own. To all this, add the clothing of other distant climes to be worn by us, and who can marvel that almost every man, woman, and child is complaining of some indisposition, or else groaning under disease and pain? Abandon luxuries of foreign growth; avoid dissipation; keep your bodies clean; your minds calm and contented; eat the productions of your own climate; drink the clear crystal water of your own spring; wear the flax, hemp, cotton, or wool that is raised in your own latitude; take all the rest of sleep that your nature and temperament require; have your hours of study, labor, exercise, and serious contemplation all regulated; and be temperate in all things. Follow these directions, and no doctor will enter your house. If you must have tea, use sage, pennyroyal, and hemlock. These are wholesome, and habit will transform them into luxuries far transcending the nerve-destroying plant of China.

It is impossible that the Creator could have erred in adapting all the fruits, grains, and other vegetable substances to each latitude of the earth, so that man and other creatures can subsist there in health, peace, and happiness. And man no more requires the products of other climes to increase these blessings, than the animals around him, who find not only their food and drink, but even their medicines produced by the soil on which they tread, without resorting to foreign importations. At the novelty of these ideas you may smile, but they are based upon immutable truth, and established, constituted, and sustained by HIM who founded the pillars of strength and beauty that support the fabric of nature, and must stand till they shall fall.

LECTURE VI.

LADIES AND GENTLEMEN:

THE nature and importance of Electrical Psychology I have clearly and philosophically argued, in a free, unchained, and fearless expression of my thoughts. For this, even if I have erred, I am entitled to your approbation, rather than your condemnation. For what is man, when he makes himself a cowering, cringing slave to the opinions of others, and tamely bows to win the momentary smiles of popular applause from the passing crowd? What I have said in relation to this science, has been the sincere breathings of my own convictions. I have, therefore, reasoned fearless of consequences; and if I have in so doing met your approbation, I rejoice at it; if I have met your disapprobation, I regret it—yet you will pardon me when I say that I cannot alter my course and accommodate myself to the opinions of others, however elevated may be their stations. Fully sensible of the duty I owe to my fellow-men, and to the Supreme Ruler of the universe, and when I discharge this to the best of my ability, I little care what men may think or even say of me.

If, however, what I have argued of the human system—the electro-nervous force—the connecting link between mind and matter—the circulation of the blood—the philosophy of disease—the rationale of its cure—the laws of health, and the philosophy of being acclimated—if these excite your surprise, ladies and gentlemen may then prepare themselves for still greater surprise in the arguments now to be offered on spirit, and the creation and government of the universe. Being myself perfectly unshackled and free, I shall exert myself in that freedom while pursuing this department of my subject.

In my introductory remarks in my THIRD Lecture, I took a general survey of the powers and operations of electricity throughout the empire of nature. We saw its secret workings, and its alternately sublime or awful manifestations. But all these operations and convulsions, however magnificently grand, will appear but as the drop of the bucket to the fountain, when compared with the UNSEEN POWER that stirs the universe. Electricity, so swift in its movement as to rival the lightning glance of thought, and so inconceivably awful in its rending force as to convulse the globe to its centre, is yet as nothing, and less than nothing, compared with that Eternal One who arms it with power—who gives it all its expansive force, and who makes it the messenger of his attributes to both nature and man. With his finger he has written the truth of this science on every object throughout the realms of nature. It is written in the beams of the mid-day sun—in the descending rains and gentle dews. It is written in the flowery field and shady grove. It is written in stars on the scroll of night. It is written in lightning on the bosom of the dark cloud. It is written deep in sympathy on the soul, and controls the most powerful affections and stormy passions of the human heart.

In this Lecture I will turn your attention to SPIRIT, or MIND—by which I mean one and the same thing—and will endeavor to prove the existence of an Infinite Spirit.

Though the powers of mind and its complicated operations can be seen, felt, and in a good degree comprehended, yet, after all, we know but little of mind as it regards its *properties*, or *substance*. Some suppose it to be absolutely and positively *immaterial*, because it is purely spirit. Others believe *mind* to be the result of organism, and contend that it cannot exist without a brain, which is the grand organ that secretes thought, even as the liver secretes its bile, or the stomach its gastric juice! The former of these suppositions is the one generally adopted by the Christian community who believe spirit to be an *immateriality*. The latter supposition is embraced by those Christians who wholly rely upon the resurrection of the body for the future existence of the spirit. They are called Materialists, because they make out the spirit to be no substance at all, but merely the result of organized matter. Of this faith was the celebrated Dr. Priestly. This latter position is also adopted by the Atheists, who contend that spirit cannot exist independent of an organized brain ; and as they reject the Christian hope of the resurrection, so they contend that mind is extinguished in the night of the grave, and sleeps in nonentity, to wake no more. Hence the idea of a God, as an intelligent Spirit, they regard as a freak of fancy —a mere chimera of the human brain. Both of these positions as it regards spirit I reject, and will give my reasons for doing so.

I reject the *immateriality* of the spirit, because that which is positively and absolutely *immaterial* cannot of course possess either length, breadth, thickness, nor occupy any space. Indeed, it cannot, in this case, possess any form ; and that which possesses no form, cannot, in the nature of things, occupy any space. And to talk of a thing having an existence, which, at the same time, has no form, nor occupies space, is the most consummate nonsense. Hence an *immateriality* is a nonentity—a blank nothing. On the other hand, if *mind* is merely the result of organism, and if it cannot exist independent of an organized brain, then who made the first brain ? Did it not require an intelligent spirit to organize its several parts, and adapt the eye to light, the ear to sound, and make these organs the inlets of sensation to the inhabitant in that brain ?

Surely the brain did not make itself, for this would only be saying, that the brain acted before it existed !

Having given my reasons for rejecting both these ideas of *mind*, I am now ready to introduce the question, What is MIND ? I answer, it is a substance—an element—as really so as air or water, but differs materially from all inert substances in being. I regard *mind* as living and embodied form--as that incomprehensible element whose *nature* it is to possess *life* and *motion*, as much so as it is the nature of other substances to possess inertia. Hence, mind is, in these two respects—namely, *life* and *motion*—directly the opposite of dead matter.

In the first place I will start with the assertion that there must be in the universe an Infinite Mind. It is impossible, in the very nature and constitution of things, that an absolute perfection of substances can be philosophically maintained without this admission. For the truth of this position I rely upon motion. By MOTION, then, I am to prove the existence of an Eternal Mind.

In the first place permit me to remark, that inherent motion is not an attribute common to all substances in nature. This globe, as a body, is moved by the *positive* and *negative* forces of electrical action. And all the operations of nature in the earth and elements are carried on by the same power. Whether it be crystalizations, or petrifactions, the growth of vegetation, or its decomposition—motions and changes in air and water—or the crumbling particles of the mountain rock—all the motions, visible and invisible, that transpire in the mineral and vegetable kingdoms, and in all their multifarious operations, are produced by electricity, which is the universal agent appointed to keep up the order and harmony of the universe. And yet it is certain that electricity does not possess inherent motion as its attribute. Motion belongs to one substance only, and that is mind.

There is certainly as much order in the universe as there is in the human body. Let us, then, look truth calmly in the face. Each organ of the body performs but one function. The eye sees—the ear hears—the olfactories smell—the glands taste—the heart throbs to regulate the blood—the hands handle—the feet walk, and the liver secretes its bile. The eye never hears, and the ear never sees. So there is but ONE SUBSTANCE in nature whose attribute is inherent motion, and that is MIND. Not one single part of the human body possesses independent motion. Electricity is there also the grand agent to move the limbs and vitals, and the living mind is the only moving power.

The point upon which I am now entering is one of most deep and thrilling interest. It is no less than to prove the existence of an Eternal Mind from *motion and the absolute perfection of the chain of elementary* *substances.* But while accomplishing this, I must call to my aid the relative subtilties of different portions of matter with which we are surrounded. Let us, for a moment, turn our attention to a few of the most obvious substances in nature, and then glance at her absolute perfection as a whole. Let us carefully notice the gradation these substances occupy toward each other in their relation to motion, and then the intrinsic beauty of the subject will appear. I will begin at the heaviest matter that may first suggest itself to my mind, and leisurely pass on, rising higher and still higher, through its various grades, up to that which is more and more rarefied, subtile, and light, till we arrive at that which must necessarily possess inherent motion, and therefore living power.

The heaviest of gross substances in existence is the most difficult to move, and hence must be at the greatest possible distance from motion. Though there are several solid substances heavier than lead, yet I choose to begin at this, as the idea I wish to convey is all that is worthy of your consideration in the present argument. Lead, then, on account of the density of its particles, is difficult to move. Were it the heaviest substance in nature, it would take its position farther distant from motion than any other substance. Rock being more easily moved than lead, takes its relative position nearer to motion. In like manner earth is more easily moved than rock. Water is more easily moved than earth. Air is more easily moved than water. The gaseous fluids are more easily moved than air, and electricity is more easily moved than the gaseous fluids.

It will now be perceived, by ladies and gentlemen, that as we mount the rounds of the ladder in the magnificent scale of material substances, there is a gradual approximation toward motion. Each substance as we rise, being more rarefied and light than the one below it, is of course nearer to motion than its grosser neighbor. And it will be perceived by every philosophic mind, that we cannot continually approximate motion without at last reaching motion, or that substance to which motion belongs.

We have now mounted from lead up to electricity; and though as we rose we found each successive substance more easily moved than the one below it, still we have not as yet found a single material that possesses inherent motion as its attribute. Lead, rock, earth, and water are moved by impulse. Air is moved by rarefication, and electricity is moved by the positive and negative forces. True we have mounted up, as before remarked, to electricity, but even this cannot move, unless it is thrown out of balance in relation to quantity as to its *positive* and *negative* forces. In such cases it flies, equalizes itself, and again sinks to rest. I am fully sensible that electricity is a fluid most inconceivably subtile, rarefied, and fine. It is computed to take four million particles of our air to make a speck as large as the smallest visible grain of sand, and yet electricity is more than seven hundred thousand times finer than air! It is almost unparticled matter, and is not only invisible, but, so far as we can judge, it is imponderable. It cannot be seen—it cannot be weighed! A thousand empty Leyden jars, capable of containing a gallon each, may be placed upon the nicest scale, and most accurately weighed. Then let these be filled with electricity, and, so far as human sagacity can determine, they will weigh no more. Hence to our perception, a thousand gallons weigh nothing.

As electricity, in regard to motion, stands upon the poise, being completely balanced by the positive and negative forces, that equalize each other, so it is easily perceived, that if we mount one step higher, we must come to that substance whose nature it is to move, and the result of that motion is thought and power. It is MIND. Hence it will be distinctly perceived, in view of the argument now offered, that we cannot, as philosophers, stop short of *motion* in the highest and most sublime substance in being. This conclusion, as the result of the argument, is absolutely and positively irresistible, and challenges refutation.

When we mount up in our contemplations through the various grades of matter, and see it continually brightening as we progress onward in our delightful career of rapture, till we arrive at that sublimated substance which can neither be seen nor weighed—which moves with a velocity of twelve million miles per minute, and can travel around this globe in the eighth part of a second, we are struck with astonishment and awe! But as this is not the last link in the immeasurable chain, we are forced to proceed onward till we arrive at the finest, most sublime, and brilliant substance in being—a substance that possesses the attributes of inherent or self-motion and living power, and from which all other motion and power throughout the immeasurable universe are derived. This is the INFINITE MIND, and possesses embodied form. He is a living being. This Infinite Mind comes in contact with electricity, gives to it motion, arms it with power, and, through this mighty unseen agent, moves the universe, and carries on all the multifarious operations of nature, whether minute or grand. Hence there is not a motion that transpires amidst the immensity of his works, from rolling globes down to the falling leaf, but what originates in the ETERNAL MIND, and by Him is performed, through electricity as his agent. Mind is, therefore, the absolute perfection of all substances in being; and as it possesses self-motion as its grand attribute, so it is, in this respect, exactly the reverse of all other substances, which are, of themselves, motionless. MIND, or SPIRIT, is above all, and absolutely disposes of and controls all. Hence mind and its agent, electricity, are both imponderable—are both invisible, and coeternal.

As the Eternal One wraps clouds and darkness round about him, and holds back the face of his throne, so many do not believe in his existence, because he is unseen, while all the visible objects of creation are to them so many realities. But the very position here assumed is an erroneous one. The very reverse of this is true. What is seen is not the reality, but is only the manifestation of the *unseen*, which is the reality. Let us carefully look at this point. There is an apple-tree; it is plainly seen; but is that tree the reality? No; but it is the result of an *invisible* cause, and that *unseen* cause is the reality. But what was it? I reply, that it was not even the seed, but the *life* of that seed was the reality; and that *unseen life* possessed the embodied form of that tree. All its shapes and colors were there. By coming in contact with the soil and moisture, in a proper temperature of climate, it was enabled to throw out its own invisible and living form. First, then, the life; next the seed in which it dwells; next the trunk of the tree appears. Then its limbs and branches—its buds, leaves, blossoms, and fruit again end in living beauty. It began in life, and in seed or life it ended. It performed an electric circle. The tree, then, is nothing more than a visible outshoot—an ultimate of an invisible substance, which is the reality.

All the powers and operations of nature are lodged in the unseen and finest portions of matter—they pass on through every grade, and end in the gross and heaviest parts. The unseen power that stirs the earthquake and convulses the globe is the *reality*. It passes through every grade of matter, and ends in rending the solid rocks and hurling cities in the vortex of ruin. The power that moves this globe in its orbit at the rate of sixty-eight thousand miles per hour, is an invisible agent, moved by omnipotent Power—for all operations and effects begin in the finest substance in being, which is the unseen cause, and therefore the reality. Hence it is the same in nature as in the human system, as I have already shown in my arguments on the philosophy of disease. The disease begins in the finest substance of the body—in the electricity of the nerves—passes on to the blood and flesh, and ends in the bones. There is, indeed, but one common mode of operation in nature and in man.

Ladies and Gentlemen—I desire now to turn your attention to one important point in relation to mind, which has been entirely overlooked by philosophers. I mean its *involuntary* powers. To speak of the *involuntary* powers of mind will certainly produce a singular impression on your hearts; and the strangeness of the idea may, perhaps, fill you with surprise. But strange as it may appear, it is nevertheless true that mind possesses the two grand attributes of *voluntary* and *involuntary* power. These two constitute the mind as a living being of embodied form. If mind make use of electricity as its agent, then it must possess the voluntary and involuntary powers to meet the positive and negative forces in electricity. If this be not so, then the Infinite Mind cannot be the Creator and Governor of the universe; because it is by his *voluntary* power that he creates a universe, but it is by his *involuntary* power that he sustains and governs it. Each of these powers, from a philosophical necessity, and from the very nature of his being, perform their own peculiar functions, and in perfect harmony preside over their own respective departments. It is the peculiar province of the voluntary power of the Infinite Mind to plan, arrange, dispose, and create worlds and their inhabitants, and it is the peculiar province of his involuntary power to govern and control these worlds and their inhabitants through the fixed laws of nature. Let us reason this point, and its consistency will appear.

In the first place—if the voluntary power of the Creator governed the universe, then no possible contingencies could happen—and nothing once commenced could ever perish prematurely. For instance: if God determined to create a human pair, and by his voluntary power commenced the work, they could not perish when his work was but partially accomplished. They are destined to come to maturity, invested with the true lineaments of form—-and destined to gaze upon each other as perfect specimens of living beauty. If not, then God in his voluntary and absolute determinations can be thwarted and disappointed.

The first male and female, at least, of each species, were produced, and the whole living chain of animated existence was placed upon this globe by the voluntary powers of God, without any previous parents from whom they received their being. They were not born, but created, for there is philosophically and strictly a very wide difference between being *created* and *born.* The *former* we call miracle, the *latter*, an order of nature. To produce a human pair without a previous father and mother, is not in the order or power of nature, for she never changes her mode of operation in the production of her animated existences.

The same is true in relation to the vegetable kingdom. The whole species of vegetable life was produced by the voluntary powers of God. In the order of nature there never was an acorn but what grew on an oak; and there never was an oak but what came from an acorn. Geology proves that there has been a period when there were no vegetables or animals on this globe. Which then was first—the acorn or the oak? If you reply that the acorn was first, then there was an acorn that did not grow on an oak. If you say that the oak was first, then there was an oak that did not come from an acorn. Whence then is the starting point of creation, if there is no God? for nature cannot start herself, as this would only be saying that she acted before she existed. Whether the Creator, in the first place, produced by his voluntary powers the seeds or the plants, is of no consequence to my present purpose. It is enough to say, that they were brought into existence without any parent stock, and in performing this work there could be no uncertainty, nor could any thing perish prematurely, because it was under the voluntary powers of the Infinite Mind.

But after this globe was created, and the first link of every species of vegetable and animal life was moved into existence by the voluntary powers of the Creator, it then naturally and of philosophical necessity passed from the control of the *voluntary* powers to the control of the *involuntary* powers of the Infinite Mind, and by them to be governed through the established laws of nature. Here then casualties may naturally arise, but no where else under the government of the Supreme.

This view of mind removes the many difficulties and perplexities we encounter, when we contemplate the unchangeable character of the Creator in the government of the world. Millions of our race are continually perishing by premature birth! The eye was most skillfully organized and adapted to see light, but saw it not. The ear was formed—all its vocal chambers were arranged, and the whole adapted to the reverberations of sound, but it never heard. It had hands, but they never handled—feet, but they never walked—lungs, but they never breathed—and a mouth, but it never spoke, nor tasted food.

Again—how many millions of our race die under ten years of age! And though they were constituted, and ripening for the enjoyment of the social and domestic affections, and the multiplication of their race, yet they were prematurely cut off, and left no progeny on earth. Now if these events are under the government of the voluntary powers of the Creator, would he not, I ask, be arrested in the execution of his voluntary will, and would not his designs fail of being accomplished? The conclusion is absolutely irresistible, for how can we judge of *designs* only as we see the adaptation of means to ends? If an eye and ear are formed, and adapted to light and sound, does not this prove the will and design of God, that the one shall see, and the other shall hear? It does. If then the infant prematurely dies and never sees an object, nor hears a sound, are not those two organs formed in vain, and are not the design and will of the Creator both frustrated? If the girl that died at ten years of age, and never bore nor nursed children—if it is admitted that she did not answer the full measure and end of her existence, in common with her sex, is not then the will of God rendered abortive, and do not his designs in this case fail? It must be so, if the government of the world is under the voluntary powers of the Infinite Mind.

That this part of my subject may be understood, and its consistency clearly seen, I will endeavor to present it before you in a very plain and simple form. I will take for illustration the human mind in connection with this body. We have two distinct brains—the cerebrum, with its two hemispheres and six lobes, commencing at the frontal part of the skull, and occupying the greater portion of the cavity; and the cerebellum, which occupies the back portion of the skull. The spinal marrow, extending through the vertebræ to the bottom of the trunk, is but the continuation of these two brains. From the spinal marrow branch out, as I have before stated, thirty-two pairs of nerves, embracing both the nerves of motion and those of sensation. From these again branch out others, and in thousands of ramifications carry out the full power of both brains into every part of the system.

The cerebrum is the great fountain of the voluntary nerves, through which the voluntary powers of the mind ever act. The cerebellum is the fountain of the involuntary nerves, through which the involuntary powers of the mind ever act. Though the voluntary and involuntary nerves from these two brains seem to blend in the spinal marrow, yet they preserve their distinct character, even to their final termination in the system, and execute the functions appertaining to their own office in producing voluntary and involuntary motion. Such is the residence of the living mind, which seems to hold its throne in the medulla oblongata, at the fountain-head of the voluntary and involuntary nerves. From thence my mind, by its volitions, controls all the voluntary motions of my body, through the cerebrum. At will I move my hands in any possible direction I please to handle substances, and at will I move my feet to walk.

But over the throbbings of my heart, the ultimate heaving of my lungs, the circulation of my blood, and the digestion of food by the stomach, I have no voluntary control. Awake, asleep, at home, abroad, the heart continues its motions, and the functions of life are executed, whether I will it or not. These then receive their motions from the involuntary powers of my mind, acting through the cerebellum. That these are all moved by mind is certain—because, take the mind or spirit from the body, and all motions, whether voluntary or involuntary, instantly cease.

I will now make an application of this to the Infinite Mind, in creating and governing the universe. If, for instance, you make machinery of various kinds, these are your own creations, for they are made by the voluntary powers of your mind. If you cultivate the earth, and raise grain and the various vegetables, to sustain your existence, these again are your own creations, for they are produced by your voluntary powers. You prepare them, by various processes, for your use—you cook and place them on the table. You eat them, and thus far they are under your voluntary action. But the moment they are eaten, your creations are finished, and the whole, naturally and of philosophical necessity, passes beyond your direct volition, and is subjected to the involuntary powers of your mind. These now take charge of this new creation, and govern it in all its involuntary motions and revolutions, according to the fixed laws of the organized system.

In like manner the voluntary powers of Deity are unchangeably employed in planning, arranging, and creating new worlds, and systems of worlds, and peopling them with inhabitants. When the whole of any such system is finished, and all its laws established for the rolling of worlds, and for the operations of the mineral, vegetable, and animal kingdoms, the whole naturally passes, according to the principles of philosophical necessity, from the action and control of his voluntary, miraculous power, and submits itself to be governed through the fixed laws of the universe, by the involuntary powers of the same Infinite Mind. As the bare presence of the human mind in the brain causes the heart to throb and the functions of life to proceed, even when that mind is wrapped in sleep so profound, that not a thought is stirring in its voluntary department, so the bare presence and majesty of the

Infinite Mind, even if he should not exercise a thought, would cause all worlds to roll through immensity, and cause all the operations of nature in the mineral, vegetable, and animal kingdoms to proceed on in their ceaseless changes; for these are under the control of the involuntary powers of the Deity, acting through the laws of the universe.

LECTURE VII.

LADIES AND GENTLEMEN:

IN my last Lecture the momentous question was presented for our consideration—Where is the starting point of all motion and power, whether voluntary or involuntary, in both nature and man? The transcendent importance of this question clothes it with the eloquence of its own splendor. I have humbly endeavored to answer it by showing that all motion and power originate in mind. And surely the idea that mind possesses the attribute of innate motion and living power, is both majestic and sublime. I have shown that mind has two grand forces. I mean its voluntary and involuntary powers, by which the world was created and is governed. I have proved the existence of the Infinite Mind from *motion and the absolute perfection of material existences.* I have shown that mind must be some substance, and not the result of organism, nor an absolute *immateriality*, which is but a *nonentity.*

I am well aware that thought, reason, and understanding are considered to be mind, and that these are *immaterial.* But they are not mind, as I have clearly proved in my Lectures on the Philosophy of Mesmerism. Thought and reason are but the results of mind. What is it that thinks and reasons? It is the mind. Then mind is something distinct from these mental operations, which are only its effects. When the voluntary powers of the mind are stilled in sleep, reason and thought are gone. Hence if these are mind, then the mind is annihilated in sleep. But if we admit mind to be a substance, a living and spiritually organized being, then all is plain. Sleep stops its motion, and thought is gone. Remove that pressure, and release the mind, and instantly it resumes its inherent motion, and the result of that motion is thought and power. On this point I add no more, but refer you to my Lectures on Mesmerism to learn my views more fully.

I now turn your attention to the subject of creation. Entering upon this, I feel the incompetency of my feeble powers to do it justice. Like a drop to an ocean, or an atom to a universe, any possible representation of the intrinsic grandeur of this subject must fall so far short of its reality, as to render any attempt at an adequate description the unpardonable presumption of impotent folly. Yet, as we are endowed with reason, and as the inspiration of the Almighty hath given us understanding, so we are bound, by the very laws of our being, to extend our researches to the utmost verge of our mental capacity. He who would curb the human intellect and say *this* or *that* is a subject with which we have no right to meddle, and into which we have no right to inquire, is not only recreant to duty as an intellectual and moral being, but betrays his own ignorance, and proves himself a scientific bigot. Give the mind full scope and sea-room—let it feel the deep stirrings of its own powers, and soar, if it can, into the light of eternity, and survey the very throne of God, and him who sitteth thereon; and, if possible, let it scan the secret energies of his creating fiat, and even examine the raw material out of which worlds were manufactured.

It is the most commonly received opinion in the Christian world, that God made all things out of nothing. It is true the inspired book does not say, or even hint this. It simply says—"In the beginning God created the heavens and the earth;" but it does not add the words—*out of nothing*. It is absolutely and philosophically impossible, in the very nature and constitution of things, that something can be made out of nothing. It implies, at the same time, a contradiction in terms. We cannot form even a notion in our imaginations how much of nothing it would take to make the least imaginable something. I am speaking of *nothing* in the strictest sense of the word. But using the word *nothing* in its common acceptation, we can easily perceive how all things could have been made out of nothing. When all visible objects are removed from a room, we say *there is nothing in it—it is empty*. Yet we know that it is filled with air, because we continue to breathe. But if the air, by a force-pump, were removed from an air-tight room, we might, with much more propriety, say *there is nothing in it;* yet electricity would be there. If solid substances were therefore made out of air, in an empty room, we could say that they were made out of nothing, for the room, according to the usual mode of expression, had nothing in it. But admitting the air to have been extracted from the room, and nothing but electricity left, and if solid substances were produced from this ethereal and invisible fluid, we could with much more apparent consistency say, that they were made out of nothing. In this sense, I grant that all things were made out of nothing. Paul says—"The things that are seen were not made of things that do appear." Here he plainly states, that the substances *seen* were made of *invisible* substances, or such as did *not appear*—for by *things* he only means *substances*.

If, however, it be said, to *create* must mean to bring into existence something from nothing, I have only to say, that this is not so; for it says, "God created man out of the *dust* of the earth." Here he created him out of something—it was out of dust, and yet it was creation. The Hebrew word rendered *create*, more strictly means to gather together by concretion, or to form by consolidation—but never can it mean to bring *something* into existence from absolutely and positively *nothing*. I therefore contend that all things were made out of electricity, which is not only an invisible and imponderable substance, but is primeval and eternal matter. It contains the invisible and imponderable properties of all things in being. That this is electricity is certain, because there is no other substance with which the Infinite Mind could have come in direct contact, so as to have produced by his creating power the solid and visible substances that compose the globe. It is, as I have already proved, in my third and fourth Lectures, philosophically impossible for mind to come in direct contact with any substance in nature except electricity. Hence electricity contains the elementary principles of all things in being, and contains them in their original, invisible, and imponderable state.

There must be something eternal. God, duration, and space exist of philosophical necessity, and that space was eternally filled with primeval matter. When I say that they exist of necessity, I mean that the contrary of space and duration cannot possibly be conceived. If infinite space were filled with an infinite globe, it would be space filled. If that globe were struck out of existence, it would be space empty. Filled or empty, it would still be *space*. As space exists of necessity, it is absolutely and positively eternal, and hence could never have been created nor changed. The same is true in relation to duration. Duration must have rolled on, even if there had been no revolutions of suns and worlds to mark its periods. The contrary cannot possibly be conceived. Hence duration and space both exist of philosophical necessity, and are absolutely eternal. Endless duration is the age of Jehovah, and space is the empire in which he dwells and reigns. This space was eternally filled with mind and invisible matter in its original state. They both exist of philosophical necessity.

Hence matter is eternal, because if there ever had been a period when there was nothing in existence as it regards matter, then nothing would now have been, for nothing cannot create itself into something. The same is true in relation to mind. If there ever had been a period when there was no mind in existence, then no mind could now have been, for mind could not have created itself, as this would be admitting mind to have acted before it existed. Hence mind and primeval matter are both coexistent and coeternal. Indeed, the one could not exist without the other, because that electricity, which is original and eternal matter, is the body of God. All other bodies are therefore emanations from his body, and all other spirits are emanations from his spirit. Hence all things are of God. He has poured himself throughout all his works. He has poured spirit from spirit's awful fountain, and kinlled into existence a world of rationals. On this principle it will be seen, that the Eternal Mind is not absolutely omnipresent, while his electrical body is, because it pervades immensity of space. Mind must be enthroned, and not diffused over the whole body. And as the mind of Jehovah actuates his body, so he produces impressions throughout the boundlessness of space, and makes himself instantly felt throughout the immensity of his works, even as the human mind, which is located in the brain, still makes its presence felt throughout the body, even to every possible extremity, and produces the impressions of its existence on others.

Mind or spirit is of itself embodied and living form. It is spiritual organism in absolute perfection, and from mind itself all form and beauty emanate. The body of man is but an outshoot or manifestation of his mind. If I may be indulged the expression, it is the ultimate of his mind. Hence every creature in existence has a body which is the shape of its mind, admitting that the physical laws of the system were not interrupted in producing the natural form of the body from mind. The serpent is all length—is all concentration, and no wonder that he can charm the bird and other creatures around him. What a singular mind the lobster must have, for he has a singular body!

We touch the finger to any substance, and in the finger we appear to feel it. But this is not so, because all feeling is in the mind. If we amputate the arm or leg, yet the fingers and toes as usual can be felt. For instance, we move a finger or wield the arm. How is this done? I answer this question by saying, that the mind has its spiritual fingers, arms, limbs, and all its lineaments of form corresponding to those of the body. The mind holds its throne in the brain, and possessing in itself the power of feeling and motion, it merely stirs its spiritual fingers, or wields its spiritual arm, and through the electric action of the nerves, which are laid, like so many telegraphic wires, between the two, the natural finger and the natural arm are compelled to make an exactly correspondent motion. This solves the mystery why the man who has his arm amputated, even up to the shoulder, yet feels his arm and his fingers as long as he lives, and often feels in them an itching sensation, or even pain, and that, too, at the same distance from his body which the fingers and arm occupied before amputation took place. All operations, convulsions, and motions begin in the unseen substance of the body, and end in its gross and solid parts. These are last moved, and last affected. This is not only so in muscular motion, but throughout nature.

Having the great principles of mind and matter before us, I will now proceed to notice the creation of worlds. I have already remarked, that all the chemical properties of all substances in existence, belonging to our globe and its surrounding elements, were made out of electricity. Hence electricity contains all the elementary principles of all things in being. The ancients supposed there to be but four elements—namely, *earth*, *air*, *fire*, and *water*. It so happens, however, that *heat* is no element at all, any more than *cold*. It is merely an effect of substances in motion, produced by their friction. Though the ancients supposed there to be but four elements, yet as the science of chemistry advances onward toward perfection, more elements are detected. I believe that about forty have been already discovered, yet we have no reason to believe that even these are all. I will suppose, however, that there are one hundred elements belonging to this globe. Then there are one hundred elements in electricity, out of which this globe was created. We will step back in our imaginations to that period when this globe, as such, had no existence. For the sake of perspicuity, we will suppose one hundred cords to be fastened on those one hundred elements in electricity. Please to bear this fact in mind.

Now, as the Eternal Mind can come in direct contact with electricity only, so he exerted his voluntary powers that constitute his creative energy, and condensed those one hundred elements that constitute electricity, down to a more gross and dense state, each element sliding down its own cord in its progress toward creation. Though mind can directly touch nothing but electricity, yet electricity, as the universal agent under Deity, can touch all substances in being. The Creator again acts, through another volume of electricity upon those one hundred partially condensed elements, and moves them down a grade farther onward toward their ultimate, or created state. And thus the work progresses; wave successively following wave down its own cord, till they all become air. Hence air contains the one hundred elements; and all the chemical properties of all things in being are involved in it. And so the work of creation progresses, under the never ceasing action of the Infinite Mind, from whom all motion and power emanate, till those one hundred elements are made into water. Hence water contains all the chemical properties of all things in being. Matter, from its invisible electric state, has now become visible in the crystal, volatile, and colorless state called water. The whole one hundred elements are here in solution; and from water, which is the universal solvent of nature, earth, and all mineral and crystalized substances were made. Boyle has proved, that by transmutation, as he terms it, nature turns water into earth; and Bishop Watson, in his "Chemical Essays," admits the same, and says, "it has never been disproved by any writer." Boyle should not have said that *nature*, by transmutation, does this; but that the CREATOR, by his own power of inherent motion, turns water into earth. I resume this interesting subject.

The one hundred elements, having reached the lower extremity of the one hundred cords, have now attained their ultimate created condition and form, and the finished globe, in all its youth, beauty, and variety, appears. At the top of those cords are the one hundred elements in their original electrical state, resting in their own invisibility; and as we descend we see the continual change each successive wave passed through, as the whole one hundred substances were, under the action of the Creator, gradually approaching their created state, till at length they emerged from invisibility and chaotic night into the light of day, and rendered the variegated beauties of their created forms visible to the eye of the beholder.

The globe being finished, it required electricity, the original substance out of which it was made, to be brought upon it by the Creator, so that his infinite mind, through this agent, might come in contact with it, in order to move and govern it, not only in its revolutions by the attractive and repulsive forces, but in producing all the changes and operations in its mineral, vegetable, and animal kingdoms. As this great work is submitted to the involuntary powers of the Infinite Mind, and as mind cannot come in direct contact with gross matter, so the beauty and simplicity of the subject appear in the grandeur of the idea, that electricity, being uncreated and eternal matter, is the only substance that mind can touch, and hence is the great physical agent the Creator employs in the government of all worlds. The unchanging laws of the universe are but the unchanging thoughts of God. Ladies and gentlemen, I desire you to bear in mind that it requires electricity, the very substance out of which the globe was made, to govern it by its positive and negative forces under the energy of Infinite Power.

As this subject is somewhat intricate, permit me to be very explicit in making myself understood. When I say that it requires electricity to govern the globe, I mean as follows: Electricity, being the uncreated substance, is the *positive* force, and the globe, being the created substance, is the *negative* force. In the next place it will be clearly perceived, that all the substances existing in the globe as so many ULTIMATES, exist in electricity as so many PRIMATES. For instance: If there is gold in the globe, then there is gold in electricity, out of which it was made. If there is phosphate of lime in the globe, out of which the shells of the ocean and bones are formed, then there is phosphate of lime in electricity, out of which it was made. The gold in electricity is in a gaseous and invisible state, and is the *positive* force, and the gold in the globe is in a solid and visible state, and is the *negative* force. As the positive and negative forces always come together, so the gold in electricity entirely controls and mineralizes the gold in the globe, but lets its ninety-nine kindred elements alone. Each one keeps its own cord of communication from top to bottom—from *primate* to *ultimate*—from *positive* to *negative*.

The same is true, not only of the gold, and of the phosphate of lime, but also of the ninety-eight remaining elements. The whole one hundred elements in electricity, as the *positive* forces, are brought to act upon the one hundred corresponding elements of the globe, as the *negative* forces, and thus not only move it on its axis, and in its revolutions around the sun, but produce all the changes and operations in these elementary substances of which the globe is composed.

These ideas of the creation and government of the world are in reality sublime. And when we reflect that the Infinite Mind comes in contact with electricity, and, through that eternal, invisible agent, governs all worlds by his involuntary powers, sublimity rises into infinite magnificence, and overwhelms the soul with awe!

The sun being pure electricity is, of course, a cold, invisible body. He is placed, as is supposed, in the centre of a retinue of worlds composing our planetary system, and that to these worlds he gives light, heat, and vegetation. But to my mind it is evident that there can be no light above our atmosphere which surrounds the globe to the height of about fifty miles. As electricity travels from the sun to the globe in never-ceasing streams, so when it strikes the top of our atmosphere it becomes faintly visible, and not before. This is proved by the morning and evening twilight, when the sun is so far below the eastern hills as to strike the very top of our atmosphere, apparently on a level with our fields, and affords a feeble light on account of the thinness of our air at that height. But as it rises higher, its rays shoot deeper, and the air growing denser as they approach the earth where we stand, till they touch it, the friction on the particles of air is of course greater, and the light and heat are rendered more intense by this density of atmosphere, and by their final reflection and reaction from the globe. Hence could we rise to the top of our atmosphere, the sun would disappear, and we should there be shrouded in total darkness. Electricity is cold and invisible, and as it travels from the sun to the globe at the rate of twelve million miles per minute, so it sets the particles of the air on fire by the rapidity of its motion and friction. Such is the philosophy of the morning and evening twilight, which never has been, and cannot be explained on any other principle than the electrical invisibility of our sun, and the absence of all light above our atmosphere. And electricity, thrown from the sun to the globe, is the mode employed by the Creator to bring it to its full growth and perfection, as a meet habitation for man.

As electricity is, in its one hundred elements, continually pouring from the sun upon the globe, why does it not continue to increase it in bulk? I reply that it does, and hence its entire creation, as to its size, vegetables, and animals, is not yet perfected, but will be in future ages. Its distance from the sun, and its exact relation to surrounding worlds, will then forbid its increase in bulk. The human body, when completely developed by food and drink, ceases its growth, even though the same sustenance, both in quality and quantity, is continued. This I will more fully explain, and hence the cause of the variation of the compass, which in philosophy yet remains inscrutable, will be made to appear.

Comets are declared by Newton and others to be melted globes, and he computed the heat of one to be several thousand times hotter than that of red-hot iron, and that it would take a comet the size of this globe, fifty thousand years to cool to its centre. Comets move in very elliptical orbits, and are deemed, on this account, to be very eccentric bodies. The cause of this is, that while they are chained by the attractive and repulsive forces to keep a circle, yet as they are propelled in a straight line, sky-rocket-like, by their own internal gaseous flames that stream in their course, so their orbits are elliptical. As they cool, their own internal force is lessened, and their orbits become more circular, because there is less trespassing on the attractive and repulsive forces, which if left to their own operation, independent of foreign influences, would move all worlds in perfect circles. Immensity of space is not square, for then worlds would move in a square, but it is round, if I may be indulged in the expression in regard to that boundless field, "whose centre is everywhere, and its circumference nowhere." Electricity, uninfluenced, always moves in circles.

The globe yet moves in an elliptical orbit, because its bowels are melted lava, and perhaps not more than one hundred miles in depth of its crust are as yet cooled. And the two hundred volcanoes now in existence, are so many spiracles to the subterranean furnace, and continually throw off the gaseous substances generated in its bosom, and cause it to transgress in some measure the attractive and repulsive forces that move it. As it cools, it continually approximates, in its orbit, nearer to a circle. This will cause the variation of the compass to continue, till its own internal forces cease to affect its motion, and allow the law of attraction and repulsion to move it in a perfect circle around the sun. And when it shall perform an exact circle in its annual revolution, it will be perfectly finished as to its size, and yet the quantity of electricity thrown upon it from the sun, will be the same as it now is, and ever has been. But this redundancy will be thrown off at its north and south poles, and in such increased quantities as to warm and enlighten those extremities of the globe, and bring them into the fruitfulness and bloom of the garden of Eden. Then the variation of the compass will cease, inasmuch as the cause will be removed that produces it. The cause of its variation is the elliptical orbit in which our globe moves, and its continual and unceasing approach to a circle. And when that circle shall be obtained, the globe will be finished, and the variation of the compass will disappear.

The globe is yet in its infancy—yes, in the embryo of its being—and it will require many thousand years to finish it. And this must be done, because under the voluntary powers of the Creator, nothing can perish prematurely. Many species of vegetables and animals now in existence, will become extinct, and disappear from the page of the naturalist, and others of a more improved and superior character will be awakened into being. They will be perfectly adapted to the future and ultimate perfection that this globe, under the energies of the Infinite Mind, is destined to attain. Its creation will then be perfected. The soil upon which we *now* stand, will *then* be some deep stratum in its crust, containing our present vegetables and animals in a state of petrifaction. These will be pronounced, by coming generations, the strange nondescript remains of past centuries, and afford to the future geologist and naturalist abundant materials for their loftiest speculations. This subject, in connection with the boundlessness of the universe, and the successive creation of worlds, I should like to pursue to a greater extent, but lest I weary your patience, I now turn your attention to the creation of the vegetable and animal species.

As globes were successively produced, so vegetables and animals were not created at once, but successively through a long series of intervening ages. Does not the Creator act through the established laws of generation in producing the human species? He does. While I freely admit that God originally produced man by what we call *miracle*, yet by miracle I only mean, that the first human beings were produced without any parent stock from whom they received their existence through ordinary generation, as we witness in the present day. And they were evidently produced full-grown, otherwise they could not have sustained their existence by procuring their own food, because the infant is helpless. But the miracle by which existence was thus conferred was not contrary to the laws of nature, but was effected by the voluntary powers of Deity exerted through the laws of nature. It was thus he established both the vegetable and animal kingdoms, not simultaneously, but successively and progressively through various ages, from the lowest vegetable life up to man, who is the glory of this lower world.

While I contend that the Creator produced the whole vegetable and animal creation at first, without any parent stock or the ordinary mode of generation, yet I would not be understood to say that there were no germs of life existing as a primordial cause adequate to the effect produced. But while I contend that there were, for instance, no acorns, nor other seeds in being, yet it is evident that the germ necessary to produce an acorn or an oak eternally existed in God. Hence the spirit of all life, whether vegetable or animal, even from the highest reasoning powers, through every link of the animal chain down to the lowest creature, and through every link of the vegetable chain, eternally existed in God, and is absolutely immortal. The whole of this immense variety combined in Deity constitutes the fullness and perfection of the ETERNAL MIND. Hence the lowest animal or vegetable life is but a part of the lowest life in God's spirit, which is the correspondent germ from whence it emanated. And the matter that forms the visible substance of all animal and vegetable bodies eternally existed in electricity, which is the original, invisible, and immortal condition of inert matter, and constitutes the body of God. Hence God and electricity are both immortal and eternal. From electricity, which is the invisible body of God, have emanated all the visible substances that constitute globes, and from the fullness of his spirit have emanated all life, form, and motion. And as all organism exists in spirit, so each animal and vegetable have developed a physical body corresponding in form to the germ of life they received from the inexhaustible fountain of the Infinite Mind.

If God does not create through the laws of nature, but by miracle, in the arbitrary sense it is generally understood by Christians, he would in this case have finished the globe before he produced the vegetable and animal kingdoms, and then moved them both into existence at the same time. But he can not, from the very nature of his perfections, suspend the production of life while forming a globe of dead matter, because he pours forth simultaneously and unchangeably all his perfections which are transmitted through correspondent laws for the production of life, so far as a globe may be finished. And as this globe was progressively forming through successive ages, and one elementary department finished before another, so the successive creation of plants and animals, as geology proves, is easily and rationally accounted for.

God could not create a fish until there was water adapted to its existence. And the moment the water was perfected, it stood in a philosophical aptitude to the marine laws of the universe, and through these emanated from the Creator that portion only of his spirit which stood in aptitude to the aqueous department, and this spirit became the living germ or life of that fish, and produced its body through the positive and negative forces of electric action. Hence the body of this fish was but the developed and visible shape of its mind. But as the water was progressively created, and for many ages covered the earth before dry land appeared, therefore, while in its turbid and unfinished state, many of the inferior species, from the lowest life up to shell-fish, and from thence up through every grade, existed before the most highly organized and perfect fish was created. And each of these grades, in like manner, through the laws of nature received their life from the infinite fountain of spirit, which became the germ of their being. The various shapes of their organic structures were but visible manifestations of the various shapes of their minds, and the most perfectly organized fish in the ocean involves in his body the organism of all below him, and his intelligence is equal in amount to the intelligence in all.

It is evident that vegetables, in some form, must have preceded animals, for an animal is but a vegetable of the second growth. May there not be a marine vegetation of as great variety and abundance in the caverned vales of the ocean as there is on earth? Of this, however, we are certain, that terrestrial plants and trees could not have been created till the dry land appeared, because the Deity does not create by any arbitrary mode of procedure, but through the immutable laws of nature. As soon as the dry land stood in a philosophical aptitude to the laws of the universe, and as the Spirit of the Creator gives out, like the sun, its unchangeable and never-ceasing emanations, so it communicated a portion of itself as the germinating principle of life, and vegetation appeared, commencing at the humblest and most imperfect formation of plants, and rising higher and still higher in the beauty of organic perfection, till the noblest fruit-trees and most powerful sons of the forest stood erect, and the finest organized plants and most beautiful flowers graced creation, and robed the new-born earth in smiles.

As each of these vegetable tribes rose in succession, one above another with increasing splendor, so each superior tribe involved in its own perfection the perfection and organism of all below it. For instance, the *first species* of plants on the yet marshy earth was ordinary; the *second*, more perfect, retained its own, and involved all contained in the *first;* the *third*, still advancing, retained its own perfection, and involved all contained in the one below it; the *fourth* makes its appearance one grade higher, and involves all the organic perfections of the *three* below it. And should we be able, in this vast range, to find the thousandth different species, that thousandth one would retain its own, and involve all the complicated beauties of organic structure and life contained in the 999 below it; because, as the form of the earth, in its progressive creation, became more and more perfect and dense, each rising vegetable species, standing in a full and exact aptitude to all the laws of nature then in action, so far as the globe was finished, would avail itself of all the life from the Creator which thus far acted through, and filled these laws.

It was the same, as we have already noticed, with all animal life in the ocean. Each higher involved in itself the perfections of all below it. It was the same with all animated beings in earth and air. The amphibious animal is, of course, the connecting link between the aqueous and terrestrial race. From the humblest land animal up to man, the same grand law obtains. Each higher involves in its constitution the perfections of all below it, even up to man. When the earth was finished, man was produced. And all the laws of nature in relation to this globe being in action, so in man's organism was involved the organism of the whole animal and vegetable creation, and in his spirit was involved the spirit of all life and intelligence in universal nature below him. And, standing in a complete relationship to the finished globe and all its perfect laws, he, of course, drank in a portion of all the perfections contained in the Infinite Spirit, and hence he was strictly in the image of God. Man is, therefore, in every sense, a perfect and grand epitome of the universe. As he is in the image of his God, he stands at the fountain-head of creation, and drinks in all the powers of universal nature, and is sustained by being fed with a due portion of both spiritual and physical sustenance. His mind is fed and developed with impressions as his body is with food.

God is a spirit, and in his spirit are involved all life, all form, and the germinating principle of all animal and vegetable spirit. And in his body, which is electricity, are involved the invisible and ethereal substances of all inert matter, out of which all globes and the bodies of all creatures were produced. In God is, therefore, involved the invisible and primal essence of all matter and spirit existing in all globes and their inhabitants.

But, after all, what is spirit? It is that substance which possesses self-motion, intelligence, sensation, and power. Spirit is a union of two grand forces. The *first* is voluntary; the *second* is involuntary. The *first* is the grand magazine in which are stored up all the voluntary powers of Infinite Intelligence. All the schemes, plans, and arrangements that appertain to all worlds and their countless inhabitants are there. The *second* contains all the involuntary powers of the Infinite Mind by which all worlds and their inhabitants, after having been created, are controlled through the fixed laws of nature. The *first* plans, arranges, and creates through the laws of its own omniscient being, which become the laws of the universe; and the *second* controls, moves, and governs all worlds and their inhabitants through the fixed laws of nature. The *first* is the positive force; the *second* is the negative force. The *first* is male; the *second* is female. Hence of the male and female we may say, that the one begins in the *voluntary*, and the other in the *involuntary power* of the Infinite Spirit. They both run through every department of the universe, and thread universal nature.

There are likewise two electricities, called the *positive* and *negative*. The positive is *male*, the negative is *female.* The male electricity belongs to the heavens; the female electricity belongs to the earth. The male and female also extend through every possible link of the immense vegetable chain, as well as through every link of the animal chain, and retain their separate existence and equal powers in the positive and negative electricities, which are the primeval, eternal, and invisible efficients of all visible matter.

Nature, as a whole, is one entire and absolute perfection, and stands in this beautiful relationship to the Creator, from whom she emanated. All the objects of creation, upon which we gaze with so much admiration—all the diversified glories of the landscape—the mineral, vegetable, and animal kingdoms, taken in one grand whole—are an exact and visible impression of the eternal perfections of his own character and invisible being, even as the stamp impresses the wax and leaves its perfect image. Nature is the visible daguerreotype shadow of his own invisible being. She is the offspring of God. The poet breathes out,

> "Man, bear thy brow aloft! view every grace
> In God's great OFFSPRING, beauteous NATURE'S face."

Creation is therefore no arbitrary act in God, but, like the ever-streaming rays of light from the sun, it is the natural result, the visible emanation and outshoot of his own invisible existence, and was progressively created through the laws of the universe, and as soon as that part of the globe in which life was to be produced stood in a finished relationship to those laws. Hence the laws of nature are but the result of the unchanging thoughts of God. One part of the globe was finished before another, and the creation of life, both vegetable and animal, was in like manner progressive, from the lowest grade and most imperfect organism, step by step, up to man, who is the perfection of all, and is in the image of God.

In this view of our subject it will be perceived that spirit is a substance eternal in its nature, and not the result of an organized brain, and that man has not received his existence by climbing gradually from the lowest link of the vegetable or animal chain up to his present perfection and grandeur. He was never in his creation a vegetable, or even a lower animal; was never a mushroom or a plant, a tadpole or a horse, as some writers contend. His existence was never ingermed and involved in any one or all of the six grand links of the living chain below him, which naturalists divide into the *vegetable*, the *pisces*, the *saurian*, the *aves*, the *marsupial*, and *mammalia kingdoms*, making man the seventh link. Throwing aside the useless technicalities of foreign language, these seven links of the living chain embraced in the seven grand kingdoms of nature can be expressed in plain English. Their rising order is as follows: FIRST—The vegetable kingdom. SECOND—The fish kingdom. THIRD—The reptile kingdom, embracing lizards, turtles, crocodiles, etc. FOURTH—The bird kingdom. FIFTH—The pouch kingdom, embracing all who protect their young by carrying them in pouches. SIXTH—The breast kingdom, or those that suckle their young; and SEVENTH—Man.

It will also be perceived, in view of my position, that gross, inert matter cannot be transmuted into mind—cannot possibly secrete mind—nor can it, in any sense whatever, become spirit through any refining process, as is contended for by some. In this case it must have preceded God, and hence on this principle God is not eternal. In the face of this theory, there must have been a period when there was nothing but inert matter in being, and if all motion originates in mind, how then was dead matter set in motion so as to produce spirit or mind through a successive series of elementary transmutations?

The same is in like manner equally true of each and every link of the animal chain below man. The monkey was never a bird nor a fish, and the horse was never a snake nor an oyster. The horse-kind, for instance, however much they may have been improved by amalgamation, have ever retained their circle, and have never broken from their link in the chain, and emerged into any other link above them. The same remarks are equally applicable to the vegetable chain. The rose-bush can never become an oak, nor the oak a peach-tree. The family involved in each link, however much they may be improved by amalgamation or culture, can never break their circle, nor emerge into another link above them. The individual life of every link of the whole animal and vegetable chain is an emanation from the Infinite Mind, and each acting through its correspondent law, and through that elementary department of the globe to which this law is unerringly adapted, has manifested its own invisible form in the visible body it produced. What the life of the seed is to the production and shape of the plant, the mind of each creature is to the production and shape of its body. Hence the brain does not produce mind, as the atheist contends, but mind was the original germ that produced and developed the brain. All vegetable life, as well as animal, is therefore a species of mind. They are both emanations from the Creator, are both immortal, and will retain their separate existence and identity without end.

Substances, in their infinite variety, pay a visit to time, assume visible forms, so as to manifest their intrinsic beauties for a moment to the eye of the beholder, and then step back into eternity, and reassume their native invisibility in their own immortality. As man is now constituted, were there but one object presented for his contemplation, the mind would soon become wearied and disgusted with sameness. But the infinite variety and beauty of the animal and vegetable creation here presented by the Deity, open to the mind sources of inexpressible and never-ceasing delight. It seems irrational, therefore, to conclude that the whole chain of being, which is perfect on earth, will be struck out of existence (except man, who is the highest link), and leave a cheerless blank in the realms of glory. For one, I expect to meet the whole animated chain, and to witness immortal groves, unwithering plants, and never-fading flowers in that world where death, and pain, and change shall be no more.

LECTURE VIII.

LADIES AND GENTLEMEN:

THE query may perhaps now arise in your minds, What bearing has the subject of the creation of this globe, and the original materials out of which it was made, advanced in the last Lecture, upon the science of Electrical Psychology? The answer to this query will be fully made to appear in the arguments I have to offer on the present occasion. I have already stated in my third Lecture, that man is an epitome of the universe, and that the chemical properties of all the various substances in existence are congregated in him, and form and constitute the very elements of his being. I have stated, that in the composition of this body are involved all the mineral and vegetable substances of this globe, even from the grossest and heaviest matter up to the most rarefied and light. And *lastly*, to finish this masterpiece of creation, I stated that the brain was invested with a living spirit, that, like an enthroned deity, presides over, and governs, through electricity as its agent, all the voluntary motions of this little, organized, corporeal universe; while its living presence, and involuntary self-moving powers, cause all the involuntary functions of life to proceed in their destined course. Hence human beings, and all animated existences, are subject to the same common electrical law that pervades the universe, and moves all worlds under the superintendence of the involuntary powers of the Infinite Spirit.

That all substances are incorporated in the body of man is irresistibly true, otherwise he could not inure himself to all, even to the most deadly poisons, and render them, in a good degree, harmless in his system. He may so accustom himself to the use of tobacco, rum, or even opium, that he can take into the stomach a quantity sufficient to produce the death of several individuals, while he himself will experience from it but a slight effect. He may even commence the use of arsenic in small quantities, gradually increasing the dose, till he gets incorporated into his system a sufficient quantity to kill, for instance, five men. As in this case it forms a part of his body, so it causes a longing for it in proportion to the quantity in the system. Should he now take a portion sufficient to kill five men, it would only produce a balance of power with that already in his system. It would meet the demand. This is habitude. But should he take one portion more, sufficient to kill any other man, he would die. Now it would be impossible for a man to inure himself to any such substances, unless there were some small particle in the composition of his body on which to build. Hence it is philosophically true, that man is an epitome of the universe, and that all the elements, in exact proportions, are most skillfully combined in his system, by the hand of the Creator; and these proportions should never be disturbed and thrown out of balance by dissipation.

Having these facts distinctly before us, I would now state, that if there are one hundred elements in the globe which was made out of the same number in electricity, then there are one hundred in the composition of man's body, for he is but an epitome of the universe. As his body was created out of the dust of the earth, and is but a vegetable of the second growth, so it is the same as though it had been originally made out of electricity. And as the globe, after its creation, required electricity, the original substance from whence, under Deity, it sprung, to move, control, and govern it, so, after man was organized, and his brain invested with a living spirit, it required electricity, the primeval substance out of which he was made, to be inhaled with the air into his lungs, and carried to every part of his system, and by which, under the impulse of mind, it must be moved, controlled, and governed by the positive and negative forces that move all worlds. You now perceive what connection Electrical Psychology has with the creation of our globe. It is a science that involves the electrical theory of the universe, and all the multifarious operations of nature.

We know not, as yet, how many elements there may be in existence. I desire it, however, to be distinctly borne in mind, that if there are one hundred in electricity, which is primal and eternal matter, then there are one hundred in the globe, one hundred in the vegetables that the globe produces, and one hundred in the human body, which is sustained by, and, therefore, made up of vegetables. The stomach is the great workshop of the system, to manufacture new materials to supply the demand occasioned by its constant wastes. The food and water taken into the stomach contain the one hundred elements to meet the supply of the one hundred that are contained in the composition of the body. Electricity, containing also one hundred, is inspired by the lungs, communicated to the blood, from the blood to the nerves, and conducted to the brain, and there laid up for the use of the mind, as I have explained in my THIRD LECTURE. This electricity is sent by the involuntary powers of the mind from the cerebellum through the pneumagastric and other involuntary nerves to the stomach, to produce digestion. The one hundred elements in electricity meet the one hundred corresponding elements in the food, and convert the whole mass into one homogeneous chyle. This is done by the positive and negative forces, without the least confusion or interference of one element with its kindred elements. The nutritious parts of this chyle are taken up by the absorbents, and, in the form of serum, are thrown into the circulating system, and transmuted into blood. The blood is the universal solvent of the system, containing, in solution, all the chemical properties that are to constitute the body, even from its finest particles down to the solid bones—the same as water is the universal solvent of nature, out of which all the constituent principles of this globe are formed, through electrical action.

The finest particles of the blood are taken up, and, by the positive and negative forces of electricity, are transmuted into flesh, tendons, bones, and all the substances that constitute the animal economy, and by the same forces the old particles of the body are thrown off, to mingle again with those of the globe. When I say that all this is effected by the one hundred electrical elements, each acting upon its own element in the food, without interfering with any of its ninety-nine kindred elements, I desire to be distinctly understood. In order to express clearly so intricate an idea, I will take one of these elements, and carry it through in all its principal bearings.

Phosphate of lime is the substance that forms our bones. It may not be a simple element, but in order to convey my ideas on this point, I will consider it so. As our bones are continually wasting away, so this waste must be supplied; and as they are often fractured, so they require new particles to reunite them by ossification. Hence there must be phosphate of lime in our food as well as in electricity. This is certain, because that hard, bony-like substance collected on the teeth in the act of mastication, is from the phosphate of lime in our food and water. Having these facts before us, I now turn to the point under consideration, and ask your undivided attention.

The food is taken into the stomach. The phosphate of lime in electricity being the *positive* force, moves from the brain—from the cerebellum—through the involuntary nerves to the stomach. It takes hold of the phosphate of lime in the food, which is the *negative* force, and leaves the other ninety-nine elements of the food unmolested. This is perfectly philosophical, for the *positive* and *negative* invariably rush together. It converts this phosphate of lime into chyle, and takes it up through the absorbents, and transmutes it into serum and blood. This phosphate of lime from the food now forms a constituent part of the blood. In the next place, the phosphate of lime in electricity takes hold of the phosphate of lime in the blood, and moves it on through all its destined avenues till it reaches the liver, which, while it secretes the bile, seems to act as the bolter of the system, to separate these one hundred elements to be distributed to their destined, correspondent parts of the body. The phosphate of lime in electricity extracts the like substance from the blood at the liver, conveys it to the various bones of the body, transmutes it into an osseous substance, and lays it down, particle after particle, and thus forms anew the solid framework of the system, while the dregs are passed off through the urinary secretions. But before it lays down the *new*, it removes the *old particle* by its repulsive force, and compels it to fly off by insensible perspiration. Fully sensible that I am now understood in reference to the operation of this one element, I am satisfied that you understand me also in relation to the operations of the other ninety-and-nine, in carrying on the work of digestion to keep up the repairs of the body.

These ideas, though somewhat intricate, are nevertheless interesting and sublime, as they unfold the relation in which man stands to the globe, to surrounding worlds and his Creator, as an epitome of the universe. If their novelty produce surprise in any breast, yet this is no reason that they should awaken resentment, or kindle indignation against the speaker. We are finite beings, can know but little, and we should ever be ready and willing to freely express our thoughts reciprocally to each other, independent of the opposition of men. By this mutual interchange of sentiment and feeling we should increase in knowledge, and grow wiser and better. Indeed, we need not go, in our contemplations, out of ourselves to learn the great principles and operations of both mind and matter, of God and his works. As it regards human research, the words of the poet are unchangeably true, and must stand unshaken when thrones and kingdoms fall. He immortalized his verse when he breathed out,

> "The proper study of mankind is MAN."

I now turn to another department of my subject, equally interesting. I mean the DOCTRINE OF IMPRESSIONS, by which both nature and man are thrown out of balance, made sick and cured. In this also we shall see the relation between man and nature.

The philosophy of disease I have briefly, but faithfully argued in my FOURTH LECTURE, and shown how it may be produced by both mental and physical impressions. Hence there is no occasion that I should weary your attention by ranging that field of pestilence and death. I shall confine my observations principally to nature, and even in these I shall be brief. The law of EQUILIBRIUM is the grand central LAW of the universe. It holds over nature the reins of government, and allows her, in her operations and changes, to stray, but not too far, from the central track. She may rise above, or fall below this law, but to its mandate she must ever bow, and at stated periods resume her medium course.

Electricity, being a universal agent, produces all the phenomena and changes that transpire in our globe and its surrounding elements. By heat, which is an electrical effect, the air is rarefied and water is evaporated. When the rarefication of the air is carried to an extreme, then that portion of the earth and its inhabitants suffer. Nature is diseased, and the denser portion of the atmosphere is, at length, aroused from its slumberings and armed with force. The sweeping hurricane rushes, or the dreadful tornado roars in its awful movement to fill up, and rescue that rarefied and diseased portion of the air, and continues its force till an equilibrium is attained in her aerial realms. At this point all action ceases, and nature is well. She was cured by her own impressions.

In like manner evaporation may continue till the air is filled, in its upper regions, with vapors. As electricity has a strong affinity for moisture, it leaves the drier portions of the atmosphere near the earth, and ascends to the moist and vapory regions above. By this process electricity is thrown out of balance. The man who has had a broken bone, even years ago, or who is subject to rheumatism, will feel an inconvenience in that spot, or in his system, as harbingers of the approaching storm. The cause of this is, that he does not inspire as much electricity as usual with the air into the lungs, and feels the inconvenience. And the storm will surely burst, if there are no upper currents of air to disperse the vapor. The electricity being thrown out of balance condenses the vapors into thick clouds by its coldness, and thus darkens the heavens. The lightnings flash, the thunders roll, the rains descend, and the war of elements will continue till that subtile fluid is equally dispersed throughout the atmosphere. Nature having gained her equilibrium, in her electrical realms, is at rest. By these awful impressions of her voice she is cured. Here it is distinctly perceived that electricity is a cold body, because it condenses the storm, and when its quantity is sufficiently great it produces hail, even in the warmest weather in our southern climates. In these few ideas we see also the philosophy of storms.

Even the globe may be sick. She may have a bowel complaint. By the confined air and continually generating gases in the lava contained in her bowels she is thrown out of balance. The earthquake awakes from slumber, and springs from its dreadful couch. It starts to discharge its force at the nearest volcano. In its fearful march it sounds its rumbling thunders and convulses the globe. Flames start up through fissures of the opening earth, and from the bottom of the ocean burning islands arise! Volcanoes bellow and disembogue. Their lava overwhelms devoted cities, and their shock hurls others in crumbling ruins! A reaction takes place, an equilibrium is produced in her subterranean realms, and she is well. By these awful impressions of her own power she is cured.

I might extend my observations to every visible department of nature, and notice her more minute operations, but these few remarks, in reference to her most stupendous and obvious convulsions, are sufficient to give you my ideas how she becomes diseased by being thrown out of her equilibrium, and how she is cured by the inherent force of her own impressions. As man, then, is an epitome of the universe, the full force of my arguments on the philosophy of disease and the rationale of its cure, advanced in my FOURTH and FIFTH LECTURES, will be clearly seen, and the relation in which man stands to the universe will be more distinctly understood.

As I am now on the doctrine of impressions, I take the liberty to say, that we should endeavor, at all times, to keep ourselves *positive* to the surrounding impressions of nature. We take disease much more easily to fall asleep in an unhealthy spot than to keep awake. While traveling in stages through some low, damp, and unhealthy places in the southern states, and where the mail stage runs both night and day, the traveler unused to that climate should be careful to take short naps during the day, so as not to fall asleep in the night stage. It renders him *passive* and *negative* to the surrounding IMPRESSIONS of nature, when she receives no salutary influence from the beams of the sun. These impressions become the *positive* force, and the electricity of the air inspired by the lungs enters the system, disturbs the nervous force and the circulation, throws the whole out of balance, and disease ensues.

A citizen of Charleston, South Carolina, may ride out, in warm weather, three or four miles into the country, and, returning the same day, will experience no inconvenience from the change. But should he remain over night and sleep there, he would, in all probability, have an attack of what is there called "*the country fever*," and in a few hours he might be a corpse, as it is considered to be even more fatal than the yellow fever. On the contrary, a person from the country visiting Charleston and returning the same day, receives no harm. But should he remain over night, and sleep there, the same mournful results might ensue. My views on the *philosophy of becoming acclimated*, in my SIXTH LECTURE, will throw some light on this point. And when we reflect that a person, while awake, is *active* and *positive* to surrounding impressions, we can easily perceive that he resists them, and consequently avoids disease.

In view of the above, it will be readily perceived why one person, even in the wakeful state, will take disease much more easily than another. Those who are firm in mind as a rock, are immovably calm, and have no fear of disease, even when some startling malady visits their neighborhood. These will not take it, even if they visit the bedside of the sick. This determined action of their minds throws a constant and powerful current of the electro-nervous force from their brains and systems, keeps them positive to surrounding impressions, and enables them to resist their force. But those who are in constant fear of some disease, who are always complaining of their feelings, pains, and aches, keep themselves constantly unwell by thus concentrating their thoughts upon their own systems, and watching each movement. When fever or cholera visits their neighborhood, these are the very persons who are in danger of an attack. Even fleeing to another section will not save them, unless this circumstance should be the means of changing their thoughts and removing their fears. The difficulty is, that fear, as Dr. Mason Good remarks, depresses the vital energy of the muscles, and slackens the motions of life. It causes the mind to shrink back on itself, and to render the system negative to the surrounding impressions of the elements, and thus engenders disease. More than one half the cases of cholera that have occurred during the past year, owe their existence to the fears and excitements of such persons, who, if they had not heard that it was in their midst, would not have been afflicted with it.

The cholera is a sudden collapse of the whole cuticle, occasioned by the electricity of the nerves at the surface suddenly retiring to the stomach and bowels. The pores of the skin being closed, the blood and other fluids follow the electricity, and retire internally. The venous circulation is obstructed and weakened, and the fluids seem to rush to the stomach and bowels, and immense secretions ensue. Intense fever and inflammation in the entire alimentary canal aggravate the other difficulties, and the storm bursts in fearful terror. The external and internal parts of the system being thrown out of balance in their electrical action, and the arterial and venous circulation having lost their equilibrium, the most dreadful cramps and convulsions ensue. All that is necessary to effect a cure is, to procure a reaction from the centre to the surface, and thus restore the usual equilibrium between the arterial and venous circulation, by equalizing the electricity of the system.

What I have now argued in relation to keeping the mind positive to surrounding impressions, will account for the well-known fact, that an individual sitting with his back to a current of air, while in a state of perspiration, will take cold much sooner than if he faced it. The cause is obvious. The front part of the brain contains the positive electro-nervous forces, under the control of the voluntary powers of the mind, and the back part contains the negative electro-nervous forces, under the control of the involuntary powers of the mind. As the positive forces, under an absolute volition of mind, resist all external impression, so the fact is readily seen why they have more power than the negative forces to resist disease, or any encroachments that may be made upon the system.

I would now remark, that the science of Electrical Psychology, being the doctrine of impressions, throws an immense flood of light on the human mind, and its susceptibility to the most strange and unreasonable impressions in the power of man to conceive. There are some minds so constituted, that it is absolutely impossible for them to resist the impressions that others may make upon them. This science unfolds what was considered an inscrutable mystery in relation to the conduct of several individuals who perished in the excitement of the Salem witchcraft. Persons of well-known character—yes, of a *stainless* moral reputation—were executed on their own confession! They were charged with being bewitched, and with having bewitched others. They plead guilty to the charge, firmly believed it to be true, and, on their own confession, were sentenced to die, and were cut off from the land of the living. They were in the psychological state. In my public experiments, I have taken persons who are naturally in the *psychological state*, and have produced such impressions upon them. I have made them confess that they were bewitched, and that they had rode on broomsticks through the air to bewitch others, and deserved to die.

Hundreds of instances have occurred in our world, where persons have been charged with murder, have confessed themselves guilty of the deed, and, on that confession, have been solemnly sentenced to die. And yet, before the day of execution arrived, the supposed murdered man was found alive in some distant section, and hurried home just in time to save an innocent fellow-creature from an ignominious death. Turn to the criminal calendar, and you will find some most striking instances of this character, and that, too, in our own country, and even in New England, the boasted land of light and morals. All such persons were naturally in the *psychological state*, and really believed what they confessed. How many may have, through such means, innocently lost their lives, the opening scenes of eternity alone can disclose. Judges and jurors have yet to learn that no man should be hung on his own confession. If he must die, let it be in the face of the most indubitable evidence, and, even then, let him be recommended to mercy, for often murder, as well as suicide, is committed under some strange hallucination of mind.

LECTURE IX.

LADIES AND GENTLEMEN:

MUCH has been advanced in relation to mind and matter, their various operations, powers, and manifestations, and the countless mental and physical impressions of which they are susceptible. I have also said not a little of the electro-nervous force, as the agent of the mind, and how the functions of every part of the system are executed under its energy. I have proved it to be the connecting link between mind and inert matter, and the agent by which the Creator moves all worlds through the boundless fields of space. I have shown the connection existing between man and nature, and the relationship he sustains to her as an epitome of the universe. As I have made electricity the grand agent that, under mind, moves on all the multifarious operations appertaining to the human system, it may be asked, what proof is there to establish this truth, independent of what has already been offered? If the arguments already advanced to prove that mind touches and moves electricity as its prime agent, are not sufficient and entirely satisfactory, I will then refer you to a visible and tangible experiment, the result of which you can witness, and thus test the truth of my position.

Let any gentleman of eloquence, feeling, and pathos strip up his sleeve, and lay his bare arm on a table where it shall be perfectly at rest; let him then repeat some impressive poetry, or any prose sentences of stirring eloquence, paying no attention to his arm till his feelings are moved, and at that instant he will see his arm covered with what are called goose-pimples. If he cease speaking, they will gradually disappear, as his mind sinks into calmness. Indeed, he can see them rise and fall with his feelings and emotions. These are occasioned by the redundant electricity which is thrown to the surface by the strong emotions and positive impulses of the excited mind. These pimples rise up at the root of each hair, and as hair is a non-conductor, and resists electricity, so the internal pressure of the electro-nervous force, propelled to the surface by the mind, causes these minute eminences to arise. Electricity is, in its nature, a cold substance. Hence, when the weather is cold, the air, being dense, contains an excess of electricity and oxygen. These, being inspired by the lungs in greater quantities than usual, brace the system, and render these pimples in the same ratio more prominent and visible than in warm weather. This circumstance confirms the proof that it is electricity moved by mind, that causes these to rise when the feelings are excited by an eloquence that causes even cold chills to pass over the body.

The proof now produced I consider to be absolutely and positively irresistible, and abundant to satisfy any philosophic mind, that electricity is the connecting link between mind and inert matter, and is, therefore, the agent through which the mind manifests its motions and powers. But should this not be sufficient to send a bold and firm conviction to the mind of the greatest skeptic, then I will endeavor to carry the proof still farther, and firmly nail the matter beyond his power to remove it. I will show him how abundant the proof is by which this position is sustained. Let the skeptic place himself on an insulated stool, with his arm entirely bare, and charge his body from a powerful electric machine. The hairs and pimples will rise up even as they do under an intense action of the mind. When the body is electrically charged on an insulated stool, even the hairs of the head rise up erect, and the same result follows when the mind is greatly excited by fear or moved by strong and stormy emotions.

If these evidences are not sufficient to strike the skeptic speechless in his opposition, then let him take a needle, and, after satisfying himself that it has no magnetic power to attract the smallest atom, let him insert it in the nerve of an animal, and it will become sufficiently magnetic to take up fine iron filings. Indeed, ladies and gentlemen, I have no doubt that the naked arm, under sufficiently strong and stirring emotions of mind to raise those pimples, would, while in that condition, produce an effect upon the electrometer.

We now perceive why the mind, when involved in trouble and distress, has so powerfully affected the body, not only in bringing upon it various diseases, but often sudden, or even instant death. And we moreover see why the mind, when calm, serene, and happy, when buoyant with hope, and animated with confidence, faith, and joy, has produced such powerful and salutary results in removing pains and diseases. We see why, under the energy of such a favorable state of mind, warts, and even king's-evil, cancers, and various tumors have been made to disappear.

Dr. John C. Warren, of Boston, Massachusetts, states, in his work on tumors, that a lady called upon him to ask his advice in relation to an experiment she thought of trying on a tumor with which she was afflicted. It was to rub it with the hand of a dead person; and, as she had a good opportunity, she asked Dr. Warren whether she had not better improve it. He states, that he at first thought of dissuading her from it, but sensible of the power of the imagination, he advised her to try the experiment. She did so, and in a few weeks the tumor disappeared!

Dr. Warren calls it the imagination; but it is the effect of a mental impression, as I have just stated, producing the result by the action of electricity through the voluntary nerves. The philosophy of this is simple, and in a few words I will notice it.

The old particles of our flesh are thrown off through the electro-nervous force of the involuntary nerves, and by the same force the new particles from the blood are laid down in their stead. Hence the wastes and repairs of the system are about balanced. We change, as I have stated, the fleshy particles of our bodies about once per year, and the bones in seven years. While, therefore, the involuntary nerves are keeping up this balance of power between the wastes and repairs of the flesh, so the same tumor that is thrown off once per year with the other particles of the body, is gradually replaced each year by the same involuntary electro-nervous force from the new particles of the blood. Over this the mind has no direct control, because it acts through the voluntary nerves. Hence when the mind is under the influence of confidence, faith, hope, and joy, organic activity is heightened, and by keeping the mind upon the tumor while in this happy state, and believing it will disappear, creates a surplus of action at that spot through the voluntary nerves, and this surplus action throws off this surplus protuberance to return no more. Such is the philosophy of what is called imagination.

The point being understood how the electro-nervous fluid removes a tumor, the query may now arise in your minds, Why does it heal a wound or cure a disease? In answer to this question I would first remark, that I am well aware that the healing properties are in the individual, or in the electricity of the system, and not in the medicine. And the question, *Why does the electro-nervous fluid heal*, has been indirectly considered in my last Lecture, when explaining the process of digestion. Because if all things were made out of electricity, then it is certain that electricity contains all the elementary principles, and therefore all the healing properties of all things in being. All the balms, oils, and minerals in existence are contained in electricity, and in their most skillfully combined proportions. This electricity is inspired with the air into the lungs, and passed through the blood into the nerves of the brain, and becomes the electro-nervous fluid. It is the positive, moving power, in all its one hundred elements, and meets the same one hundred kindred elements that compose the body, and are the negative power. And the positive and negative forces coming together, and the one hundred elements in electricity meeting the one hundred of the same kind in the body, each tending to its own, produce the healing result, on the same principle that they produce digestion, repair the system, and equalize circulation. For a full explanation of this point you will please call to mind my remarks on the digestive process in my last Lecture, and the whole will be easily comprehended.

I now leave this point and call your attention to the brain, which is the palace and throne of the mind, where it dwells and reigns. I shall briefly notice its operations in its earthly house, point out the connection between the voluntary and involuntary nerves through which the mind acts, and conclude by noticing the philosophy of sleep.

I have stated in a former Lecture, that each individual has two distinct brains—namely, the cerebrum, which occupies the frontal part of the cranium, filling the principal part of its cavity, and the cerebellum, which occupies the back portion of the cranium. The voluntary nerves belong to the cerebrum, through which the voluntary powers of the mind act, and the involuntary nerves belong to the cerebellum, through which the involuntary powers of the mind act. And though in their intricate convolutions through every part of the cranium, they seem to interweave and blend in ten thousand ways, and both dive into the spine, and there combine to form the spinal marrow, yet by some secret charm they preserve their entirely distinct character as to their voluntary and involuntary powers, and thus carry out the separate forces of both brains into every part of the entire system.

Our voluntary powers by which we reason, and by which we move our limbs and bodies, being the positive force during our wakeful moments, soon tire, and require the refreshment of sleep to restore them. But our involuntary powers, by which the heart and lungs are moved, and the functions of life performed, commence their career of action at birth, and often continue it, without any apparent weariness, for seventy, eighty, or even a hundred years. They, however, tire at last, and also require sleep. But when they sleep, it is death. Natural sleep, which involves the sleep of the voluntary powers only in a state of entire insensibility, is so far on the road to death. It is the half-way house to the land of silence. By natural sleep our exhausted voluntary powers are restored, we wake up refreshed, our weariness has disappeared, and we are prepared for renewed action. There is at the same time another important end gained by our insensibility in sleep. The involuntary powers, being left free from the exciting action of the voluntary powers, were allowed to gradually slacken their movements, and regain their true and healthful equilibrium.

In order that this part of my subject may be distinctly understood, I must point out the connection between the voluntary and involuntary powers, and the manner in which they may reciprocally affect each other. Our pulsations are more frequent in the evening than in the morning. This is owing to the mental and physical action of our voluntary powers during our wakeful moments. They, being the positive force, trespass upon the involuntary powers, which are the negative force, and hence one grand object of sleep is to allow the heart to come down to its due natural slowness of pulsation. The voluntary powers, being the positive force, can of course trespass upon the involuntary, till they become tired out and sink to rest in the sleep of death. This I will endeavor to make plain by the following circumstances.

In the barbarous ages of the world, criminals have been, in some instances, doomed to die through deprivation of sleep. Guards, who took charge of them by turns, both night and day, were ordered to keep them incessantly awake. This they did do by touching them with some instrument of torture, and sometimes with fire, whenever exhausted nature would yield to repose. In such instances the pulsations of the heart are gradually increased above their usual throb, becoming more and more frequent, till between the third and fourth day, when they rise to about one hundred and twenty per minute, which is a fever heat. And so on, gradually increasing, till the seventh or eighth day, when the pulse is only perceived by a tremulous motion, inconsistent with the continuance of life, and the sufferer expires. You now perceive that the voluntary powers, by being kept awake, trespass upon the involuntary powers till they too are tired, and fall asleep; but that sleep is death.

I have already remarked, that when our voluntary powers are exhausted they fall asleep at night, and in the morning we wake up restored. This brought us half way on our journey to the door of death, and well may sleep, in all ages, have been considered its emblem. But when the involuntary powers are entirely exhausted by pain, by fevers, or by sickness in general, they also require rest, and therefore fall asleep. This is death. Now, if there were no positive organic destruction, and could the laws of chemistry that decompose our bodies be suspended, and could the entire system, blood and all, be kept precisely in the same condition as it was when we expired, we should wake up after a few days in perfect health. This is no revery of fancy, no chimera of the speaker's brain, but absolutely and positively true, and in perfect accordance with the principles of philosophy. As this subject is new, I will take it into consideration, as it must be not only interesting, but vastly important to us all.

In the first place, we know that the serpent and toad species, the alligator tribe, and nearly all insects, fall into torpidity in winter, and in the spring they are aroused from this state in perfect health, and with regenerated vigor. Not only their voluntary, but also their involuntary powers were asleep. The breathing lungs and throbbing heart were motionless, and the circulating blood was stilled. The raccoon and several other species of animals burrow, and fall into a torpid state as winter approaches, and remain till spring without any sustenance whatever, and then make their appearance without any loss of flesh. In all these creatures the *foramen ovale*, an opening between the auricles of the heart, never closes, and hence they can live without breathing.

It may, however, be said, that this is by no means applicable to human beings, for they cannot live without breathing. How then do we live without breathing, or even without the throbbing of the heart, or the circulation of the blood, till we were born into existance? I answer by saying, that the foramen ovale was not closed, but generally closes soon after our birth takes place. We know that the new-born infant requires but little air, and can live where we should be smothered and perish. Again, there is occasionally an individual in whom this never closes. It is true, that these instances are exceedingly rare, and such persons are liable, when disease or pain exhausts the involuntary powers, to sink into a torpid state, which has been mistaken for death. The lungs and heart suspended their motions, the blood ceased to circulate, and the limbs grew stiff and cold. Thousands in this condition have been prematurely buried, came to life, struggled, turned over in their coffins, and perished. On being disinterred they have been found with the face downward. Some, placed in tombs, have revived, been accidentally heard, and fortunately rescued. And though they expired with a distressing disease, yet they awoke to life in health.

An instance of this kind occurred in New Jersey, where an individual was apparently in a state of death. He was cold and motionless. The lungs heaved not; the heart in its pulsations was stilled; the blood was stagnated in its channels, and had ceased to flow. His funeral was two or three times appointed, the friends and neighbors assembled, and through the entreaties of the physician it was postponed to another time. He at length awoke from this state to life, and awoke in health. Some call this singular condition, where circulation is suspended, a trance; but it is the sleep of the involuntary powers in those individuals only where the foramen ovale is not closed. In all other persons it would be death.

In view of these facts we should be warned not to inter our friends too soon after we suppose they are dead. And as death is only the sleep of the involuntary powers, so dying cannot be a painful process, but one that must afford the greatest pleasure and delight of which we can conceive. It must certainly afford as much real enjoyment to die as to lie down upon our beds and sink into natural sleep. All sufferings arise from the nature of the disease that tires out the involuntary powers, and not from the gasping struggles of the dying. The fatigues, toils, and sufferings of the day, that prepare our voluntary powers for a night's repose, are not to be taxed upon the process of our dropping into natural sleep. This is of itself pleasurable, and so is also the process of dropping into the sleep of death. In this respect it is not "the king of terrors," but the welcome angel of soothing smiles and crowning joys.

You now perceive that though the voluntary and involuntary powers of the mind are entirely distinct, and seem to act independently of each other through two distinct sets of nerves, yet there must be some secret link between the two that unites them in one bond of everlasting and indissoluble union. That this point may be settled as accurately as possible, I must call your attention to the voluntary and involuntary nerves, to determine the connection between them, and also to ascertain the throne of the mind, or in what particular part of the brain it may be located.

Though I have faithfully explained the philosophy of the circulation of the blood in my third Lecture, yet I am compelled to glance at the position in which the arterial and venous circulation stand in relation to each other, and notice the connection between them, and then see if this will not throw some light on the voluntary and involuntary nervous forces of the brain.

The circulating system is in reality two distinct systems. The *arterial* carries the cherry-red blood, which is *positive*, and ever flows from the lungs and heart to the extremities, and the *venous* carries the dark blood, which is *negative*, and ever flows from the extremities to the heart and lungs. The arterial system, commencing at the lungs and heart, divides into various branches, and these again into others, and so on, till they spread out in thousands of small blood-vessels called capillaries, too minute for the dissecting knife to trace, or the naked eye to see. Indeed, they run out and seem to end, if I may so speak, in millions of nothings. At their terminations, and in just as many millions of nothings, the venous system begins. Though there is no visible connection, that the dissector can trace between the two, yet we know that such a connection must exist, otherwise the blood could never pass from the capillaries of the arteries into those of the veins.

As the nervous system must correspond with the circulating system, so these remarks will prepare your minds for a correct understanding of my views in relation to the *voluntary* and *involuntary nerves* and the throne of the mind. The involuntary nerves have their origin in the cerebellum, which is the organ of involuntary motion, wind round in intricate mazes, and form its convolutions. They pass into the spine, and form the spinal marrow, a part of which is but the cerebellum continued, and from thence they branch out to the heart, lungs, and to all the involuntary parts of the system, so that motion may be communicated to them by the involuntary powers of the mind. They return through another department of the spinal marrow to the brain, and terminate in the medulla oblongata in thousands of nothings, by which I only mean invisible fibres. In just as many thousands of nothings, the voluntary nerves begin—wind round in like intricate mazes, and form the convolutions of the cerebrum, which is the great organ of voluntary motion. They pass into the spine and form the spinal marrow, which is but the continuation of the two brains, and from thence they branch out to all the voluntary parts of the system, so that motion may be communicated to them at pleasure by the voluntary powers of the mind.

It is evident that the same secret and invisible connection exists between the voluntary and involuntary nerves of the two brains that exists between the arteries and veins of the two circulating systems which carry the positive and negative blood. If this connection between the voluntary and involuntary nerves of the two brains does not exist, then the *voluntary* powers could not, by their wakefulness, produce the least possible effect upon the involuntary powers, so as to tire them out and produce death, nor could they even cause the least disease. And on the other hand, the *involuntary* could not produce the least possible effect upon the *voluntary* powers.

The mind is certainly not diffused throughout both brains, because a part of the brain may be destroyed, and the mind still retain all its powers and faculties. If it were thus diffused, being an active principle, it would keep every organ of the brain uniformly excited.

Hence it appears most reasonable, that the mind holds its throne between the TERMINATION of the involuntary nerves of the cerebellum and the COMMENCEMENT of the voluntary nerves of the cerebrum. This will appear rational, if we reflect that any sudden, irregular motion of the heart for instance, or of any other involuntary organ, will instantly convey the warning to the mind, and bid it beware. But this sensation could not be communicated to the mind unless it held its throne between the voluntary and involuntary nerves. This, though difficult to determine, seems to be in the MEDULLA OBLONGATA. There the royal monarch sits enthroned. From the external world, through one common nerve, he receives all his impressions, and from thence he transmits them by electric telegraph to the various departments of his palace—or, to speak more phrenologically, to the different organs of the brain, and thus manifests the true impression of his character to the world.

In the light our subject now stands, the philosophy of natural sleep can be stated in very few words Heat expands, and cold shrinks the nerves of the brain. As the *mind* is that sublimated substance we call *spirit*, and is a living being of embodied form, and being the reverse of dead matter, it is its nature to move, and the result of that motion is thought and power. By the shrinking of the nerves of the cerebrum its motions are stilled, and thought is gone. This is sleep.

I am done, and though errors may be detected, I care not. I have spoken freely, and meant to do so. And though skeptics may sneer, yet I see and feel the full weight, importance, and majesty of my subject. I have every thing to hope for in its favor, as a powerful agent to remove disease, and pain, and to succor the distressed.

LECTURE X.

LADIES AND GENTLEMEN:

THE science of Electrical Psychology is yet in the infancy of its existence, and as so many astonishing cures have been already effected under its energy while yet in the very dawn of its being, so we can at present form but a faint conception of that supreme empire over disease which it is ultimately destined in some future age to attain, or of that magnificence and power with which coming generations will see it invested. The time will come when it shall stand forth in the full vigor and beauty of its manhood, clothed in its meridian splendor, and shedding the pure light and heat of its own healing power over the millions of our race. In the great field of sciences already known to the philosopher, that of Electrical Psychology stands pre-eminent. In making this declaration I do not detract one iota from their value or greatness, but on the contrary yield to them all their grandeur. They are worthy of the Creator who established them when he founded the empire of nature, and worthy of the master spirits who revealed them to the world. They are great, and the various ranks of greatness they occupy in the scale of sciences were assigned them by that unerring Being who arranged the order and harmony of the universe, and not by erring man. Then censure me not for the declaration I make as it regards their relative importance.

I am not insensible of the fact that astronomy is a science of that peculiar and lofty character that knocks at the door of the heart, calls aloud for the most bold and daring thought, and bids it soar into the regions of unbounded space to survey, measure, weigh, and balance suns and worlds. The bare sublimity of the conception that man, who is but "an atom of an atom-world," can enter those vast dominions of the Creator and take cognizance of the grandeur of their expansiveness, the wisdom of their arrangements, the beauty of their variety, and the order and harmony of their motions, bespeaks the high origin of his nature and destiny as an intellectual and moral being. But astronomy, however vast may be its fields of brilliant suns and blooming worlds, and however strong may be its claims upon the human intellect for the exercise of its highest powers and most deep-stirring energies is, after all, but a physical science, and therefore inferior to the science of mind.

If, from this lofty and daring flight among countless suns and worlds, we descend and dive into the depths of the globe on which we tread, and should we be able to explore its dark subterranean dens and deepest caverns, even down to its centre—or should we only range its known geological departments and survey the various strata of its crust, and scrutinize the marine, vegetable, and animal remains they contain as so many deposits and mementoes marking the footsteps of nature in former ages, we shall also find a call for the deepest thought to scan the mysteries of geological science, and to search out and explain the operations and convulsions of nature in these subterranean regions. These contemplations on the heavens above, or on the structure of the earth beneath, are certainly sublime, and challenge the noblest powers of the human soul. But high as the science of astronomy may call the mind to soar, or deep as the science of geology may urge it to descend, yet these, after all, are only physical in their character, end, and aim.

But, on the other hand, the science of Electrical Psychology being the science of the living mind, its silent energetic workings and mysterious powers are as far above these and all others of a like character as mind is supreme over senseless matter. And as the object of this science is to produce such mental and moral impressions upon the sick and afflicted as shall restore them to health and happiness, and as this can positively be accomplished upon all who are in the electro-psychological state, so the vast importance and utility of this science are but faintly realized by the public at large—are but dimly seen. Even when these mental impressions can not be made upon an individual so as even to paralyze a muscle, still I can, in the great majority of cases, either cure or greatly benefit the sufferer by physical impressions upon his body, provided that he will faithfully follow my directions.

The remedies this science prescribes are always safe because its pharmacy is of God, and rests on the bosom of nature. Even in those cases where they can do no good they will do no harm. It discards those powerful, poisonous, and dangerous medicines of the old-school practice which, in their experiments, have proved so fatal to the lives of millions of our race. It selects those only from the fields of nature which grow in that part of the earth's latitude where we live, and such must be adapted to our constitution and condition by the wisdom of the Creator, who has provided both food and medicine to all animals and creatures in that part of the globe where he awakened them into existence. If we watch the actions of the animal creation we shall learn that there is, and indeed must be, as much simplicity in our medicine as there is in our food. Allopathy, Thompsonianism, Homeopathy, Hydropathy, Electropathy, and I will add, Aeripathy and Terrapathy, should never be made to exist as so many separate medical schools, but the excellences of them all, so far as they are applicable to the relief of human sufferings in any corresponding latitude on earth, should be combined into one grand system TO CURE, and call it CURAPATHY.

Water is nature's universal solvent, and when properly applied, in its various degrees of heat and cold, to the different parts of the system, either externally or internally as the case may require, it is a most powerful agent to restore the equilibrium of the circulating forces and remove disease. But water alone is not sufficient in every case. The air in its application and various temperatures should not be overlooked, nor the quality and temperature of that which is inhaled into the lungs. We can live longer without food or water than we can without air. In very warm weather, when the air is greatly rarefied by heat, let the invalid, and even the well person, descend into a dry cellar, entirely under ground, undress, and there not only breathe the pure, cool, and earth-impregnated air for half an hour or more each day, but let the body at the same time be exposed to its action. This will brace the feeble system of the invalid, gradually raising it up to soundness, and impart vigor and energy to the healthy. Call this Aeripathy. But this is not sufficient to remove every case of disease. Electricity, galvanism, and magnetism, in all their forms, should not be forgotten. Electricity is the agent of mind and the invisible power of matter. These three should be passed through different parts of the human system to ease pain, and remove nervous obstructions and nervous diseases by thus equalizing the nervous force. This is Electropathy, and requires not only a familiar acquaintance with electrical science, but also great skill in its correct application to the diseased.

But this alone is not sufficient. We must not be unmindful of our mother earth, nor wholly forget to lean upon her bosom. Our bodies take into their composition, not only due portions of *electricity*, *air*, and *water*, these three grand divisions of nature, but they also claim a large portion of earth, out of which they are said to have been formed. We are, indeed, an epitome of the universe, and stand in an exact aptitude and relationship to nature. This being so, permit me to remark, that diseased persons, during the summer season or warm months, should seek some farmer's secluded plough-field or garden, expose their naked bodies, except the covered head, for several minutes to the rays of the sun. When well heated and rubbed, cover them up in the fresh earth for half an hour or more, then wash and rub briskly with a towel, dry well in the sun, and dress. At other times, and as often as convenient, let the invalid follow the ploughman, and as he turns up the fresh earth let him breathe the air while charged with the invisible life-giving substances that rise from the ground.

As the above advantages can only be enjoyed by those in the country, what shall be done for those in cities? In order to be more explicit on this interesting point, when you build you a house make provisions for a room that can admit the sun through its windows. It might be connected with your bathing establishment, and in the same room. Have at least three articles permanently constructed like the tub in which you lie down to bathe the body. Let one be filled with a pure, rich, fertile earth—another with a light, sandy soil, and a third with clay. Here let the invalid each day bury his body in one of the first two, and remain at least half an hour, after first having exposed it to the action of the sun. Then let him wash, rub well with a towel, and dry thoroughly in the sun before dressing. But in case of severe chronic diseases, apply pure water to the clay till it becomes a mortar in which the body will sink, and let the patient bathe his body in this. If the disease is attended with inflammation, let the mortar be warm as can be conveniently borne, and then wash the body in water of the same temperature. If there is no inflammation, let the water be cold as its usual summer temperature, and wash the body in water of the same, rub briskly with a towel, and always dry thoroughly in the sun, if possible, before dressing. By this mode of treatment an empire over many diseases will be obtained, when all other modes have failed. This I will name TERRAPATHY. Simple internal medicines, of an animal or vegetable nature, may at times be taken into the stomach, but nothing of a poisonous character. I therefore repeat, that Electrical Psychology is the doctrine of mental and physical impressions to cure the sick. This can often be done without any medicine at all, by simply a mental impression, which this science involves. But when I use physical impressions, I can not restrict my action to the narrow sectarian "medical schools" set up by men, but avail myself of a free and untrammeled range in the extensive fields of nature. Hence I sum up the whole matter by re-affirming, that Allopathy, Thompsonianism, Homeopathy, Hydropathy, Electropathy, to which I add Aeripathy and Terrapathy, should never be established as so many separate medical schools. In the splendid science of Electrical Psychology I embrace the excellences of them all so far as they are applicable to the relief of human sufferings, and combine them in one grand system to cure, and call it CURAPATHY.

I presume the question will arise in some minds, why should Terrapathy, or the various applications of different kinds of earth to the body, have a tendency to cure? This question is somewhat difficult of solution, but no more so than to solve why water, air, or any medicine has a tendency to produce a sanative result upon the human system. If, however, you will recall my arguments on the philosophy of digestion in my eighth lecture, and what I said on the philosophy of cure in my ninth, you will have my answer to the question, *Why* *should Terrapathy have a tendency to cure?* No physician pretends to explain *why* his medicines produce certain effects upon the system. He merely knows the fact, and acts accordingly. These facts, as to the medicinal virtues of certain substances, have in many cases, at least, been learned from the animal creation or been discovered by accident. When one rattlesnake bites another, the wounded one will invariably eat a certain plant and live. A negro, laboring in the Dismal Swamp, in North Carolina, observing this, ate the same on being bitten by a rattlesnake, and was cured. Others laboring there have practiced it with the same success. Indeed, nearly every useful vegetable medicine now in possession of doctors, has been discovered by some old woman in the country, or by old hunters and Indians, and, after much learned opposition and medical sneering, it has been at length received as their adopted child, and one after another has been, after passing through a like ordeal, introduced into the medical family, and claimed as their lawful paternity. Even Peruvian bark was discovered by the Jesuits to be an excellent specific for ague and fever. For this they were persecuted by the medical profession, who sneered at the remedy, laughed its discoverers to scorn, and moved the clergy to fulminate their thunders against them and their medicine. But they have long ago adopted this persecuted child into the medical family and school. Now, they can not treat an intermittent fever without this darling. You know that quinine, which is manufactured from Peruvian bark, is in our day "all the rage" in treating ague and fever. But setting aside the manner in which the medical properties of substances were first discovered, let us come directly to the subject under consideration.

What evidence, we may now ask, is there that Terrapathy possesses any power to cure? It will be remembered that I have contended throughout these Lectures that electricity is the power that controls matter, even from the smallest particle up to the most ponderous globes, and that mind is a self-moving substance that controls electricity, and that hence all power and motion consubstantially dwell in, and emanate from mind. I have contended that the sanative principle is in the man, and is involved in the electro-nervous fluid, which is the positive force breathed in from the atmosphere, and the food taken into the stomach is the negative force abstracted from the earth, and answering to it. These two forces in man, being the *positive* and *negative*, meet together and embrace each other. All the elements of the positive electro-nervous force of the brain blend with all the corresponding elements of the negative electro-vegetative force of the food in the stomach, and digestion, which is but the transmutation of food into the elements of the system, proceeds. The body, being the medium between these two forces, is gradually and incessantly changing, by the old particles being dismissed from its service and new ones enlisted to supply the waste of this unceasing war. But the electricity inspired with the air into the lungs, in being secreted by the brain, undergoes a change from what it was in the atmosphere equal in degree and corresponding to that of earth transmuted into vegetables This is evidently so, because in order to enable it to act upon the negative electric *force* of the food in the stomach, it must stand in the same positive relationship to *this* that the positive electricity of the atmosphere does to the negative electricity of the globe in order to transmute its earthy particles into vegetable substances. Should the electricity of the atmosphere, when taken into the lungs, remain in its unchanged state, it could never carry on a perfect digestion, so as to transmute food into flesh and bones, because a perfect aptitude between this electricity, the food, and the living body does not exist. This can only be done by electricity, after having been secreted and changed by the brain into an electro-nervous fluid. But, on the other hand, this electro-nervous fluid can not possibly transmute earthy particles into vegetables, because a perfect aptitude between these three changing properties does not exist. This can only be done by the electricities of the atmosphere and globe acting in conjunction.

Having these general facts distinctly before us, we shall now be able to discover and appreciate the fact, that TERRAPATHY possesses also, and that too in an eminent degree, its distinct powers to cure. To a candid consideration of this point I now invite your particular attention.

In my Fourth Lecture I have argued the philosophy of health and disease, and trust that the ideas there advanced are retained by you all. When the mind is serene, and its mental and moral attributes are so balanced as to act in perfect unison; when all the internal circulating forces of the body are equalized so as to move on in one harmonious and beautiful round in their destined channels; and when the body externally stands in the same well-balanced and beautiful relation to the air, water, vegetables, and earth, then health must be the natural result of this state of things, on the principle of the common law of equilibrium, in which all other laws are involved. But when any or all of these are thrown out of balance, disease ensues. How, then, are these difficulties to be overcome, the circulating forces equalized, the mind restored to its wonted serenity, and health and happiness regained? In reply to these important and interesting queries, I would in the first place observe, that it is admitted by all who are acquainted with the principles of electrical science, that the atmosphere is charged with *positive* electricity, and the earth with *negative* electricity. Each of these electricities possess, of course, the attractive and repulsive forces.

Now, as all diseases are either of a positive or negative character, so they must be cured by the positive or negative electricities, or by the application of substances that contain them. We should first attempt a cure by the science of Electrical Psychology alone. Whether this, of itself, would prove successful or not, could be tested in a few moments, by an immediate trial of mental impressions upon the patient. If these were successful, the mind would resume the balance of its powers. Its peace and contentment would be restored, and by its mental energies the nervous, and other circulating forces of the body would be equalized, and health and happiness ensue. But if the disease can not be psychologically cured by direct mental impressions, then we are compelled to resort to physical remedies, and make what I call physical impressions upon the body, and through these to reach the mind, because the mind and body intermutually and reciprocally affect each other.

Suppose, then, the disease to be a *positive one*, occasioned by the positive electricity of the system being thrown out of balance. In all diseases of this character, even though they may be attended with severe pain, yet there is never any inflammation. To these make cold applications, or the positive electric forces. Opposites should seldom be used, for they can not act as permanent alteratives. Or suppose the disease to be a *negative one*, occasioned by the negative electricity of the system being thrown out of balance. All diseases of this character will be attended, not only with pain, but inflammation. To these we should apply the negative forces, which belong in a peculiar sense to the earth.

Here permit me to exhibit this interesting subject in a more definite and orderly arrangement, so as to be readily understood. Now, do you not perceive that, according to the peculiar nature of the disease, we should apply electricity, galvanism, or magnetism, or else air in its various temperatures, from the coldest to the warmest that can be borne? Do you not perceive that when the disease requires it, that water, in its various temperatures, should be applied, either externally or internally? And do you not perceive that herbs, in their various decocted combinations, or otherwise, should also, when the disease requires it, be taken internally or applied externally, and of such temperatures as to produce a salutary result? We have now descended from electricity, the finest known inert substance in being, through all the grand elementary departments of nature, down to the vegetable kingdom. Now, shall we stop here, or proceed down to EARTH, the MOTHER of us all, and draw relief from her generous bosom? Shall we stop at herbs, earth's eldest-born children, who forever hang upon her breast, or shall we approach the maternal germinating and generating power and source from whence they draw their vital being? As the earth is electrically *negative*, and peculiarly so, how supreme must her powers be over all diseases attended with inflammation! Earthy substances, in various clayey or other combinations, and in the form of poultices, either cold or warm, as the case may require, can be applied to the diseased part, and with the same convenience that we do any other substance. Or, when necessary, let the whole body be buried in soils of various kinds, in their natural vegetating temperature. Or should the disease require it, let the body be immersed in various mortars made of one or several kinds of clay, or other earthy compounds. The only thing requisite is a good knowledge of their chemical properties, and good judgment and skill *how*, and *when*, and in what manner to apply them to any given disease.

Consistent and even irresistible as all this may appear, yet the question comes up—Can any facts be produced as evidence of the sanative results of Terrapathy? Certainly; there are thousands of instances of its power. But as it has never occurred to any mind to bring it into practice as a system, so the instances of its power are merely incidental. I have made it my study occasionally for five years, and yet I am now only ready to introduce it into the service of my grand system of Electro-Psychological Curapathy, and commence its practice. But to the point.

I might refer, with more force than many are aware, to the spittle and clay prepared by the Master, and put on the eyes of a blind man, whom he then ordered to go and wash in the Pool of Siloam, and on doing of which he received his sight. Most of Christians suppose that all this was useless, and that he employed some other agent to restore his sight besides the means he manifestly employed. But it is in vain for any one to contend that Christ practiced a fraud, by putting clay upon his eyes to produce no possible effect, and then secretly and deceptively restored his sight by some other power. It was done by the very means that he thus openly employed, and by which he pretended it was done, and without a shade of deception through fear of men. It was accomplished by the combined forces of Terrapathy, Hydropathy, and the faith and confidence inspired in the blind man's mind by a strong psychological impression.

But without any reference whatever to the Master, I will, in as few words as possible, show that the various earths possess a most powerful electro-absorbent force to draw out inflammation from the human system, and with which no other known substances in existence can compare. The smallest effect we witness on earth is often pregnant with the greatest power, and portends the most salutary or awful results. A straw shows the direction of the current, however deep its waters, or secret its irresistible movement.

Take then, for example, the sting of the bee, or the bite of any poisonous insect, where the pain, swelling, and inflammation would be great. The moment the circumstance occurs take almost any kind of earth at hand capable of producing vegetation, moisten it with spittle or blood-warm water, apply it to the wound, and in a few moments the poison will be extracted, and every painful result arrested. But a blue or white clay soil, moistened with warm water or spittle, is preferable, if it can be obtained without delay.

As to the drawing and absorbent powers of clay and other earths, I might bring a few simple facts. For instance, let oil or grease be spilled upon the floor, and remain till the board be saturated. No soap and water can remove it—no washings can make it disappear; yet clay, rightly prepared, will extract it. Or suppose there are oil or grease spots upon a silk dress. Rub pulverized magnesia on the opposite or wrong side of the dress, then press a hot iron to the grease spot on the right side, and the whole will instantly disappear, and leave the silk as bright and fair as ever. The same result may be obtained by using pulverized French chalk on any beautiful woolen dresses or shawls. Now it is utterly impossible that these effects could be produced unless these substances possessed a supreme electro-absorbent power. Or let clothing be saturated with any substance producing the strongest possible and the most pungent and enduring scent, even that of the skunk, and when no washing, no airing can remove it, let it be buried in any soil capable of producing a free vegetation, and in three or four days the whole will entirely disappear.

The question arises—What is the cause of this? I answer by saying, that the human stomach can not, neither can that of any other animal, digest any creature swallowed alive, so long as it possesses animal life. It must die before the stomach can digest and appropriate it to the elements that compose the body, and until then the creature must sustain its existence by drawing its sustenance from the vital force of the body. So the earth can not digest, that is, decompose, any substance while that substance has either animal or vegetable life. These both draw strength and substance from her. But the moment they are dead she can digest and appropriate them to her own use, and thus invigorate and fructify herself. Hence it is seen why Terrapathy can cure. It is because all substances in the human system that are adverse to animal life and health, the earth can appropriate to herself, and so she can all essences of the most pungent smell. She digests the whole, and manufactures and re-absorbs them again into the elements that compose her maternal body. She removes every substance from the human system adverse to the laws of animal life, and leaves perfect health. Hence the supremacy of Electro-Psychological Curapathy over all medical systems in being is clearly manifest, and I add no more.

LECTURE XI.

PRIVATE INSTRUCTIONS TO THE CLASS.

THE SECRET REVEALED.

GENTLEMEN:

IN my last Lecture I have argued the supremacy of Curapathy over all medical systems in existence, for in it are combined the excellences of them all; and, in addition to these, it contains modes of treatment that no medical science as yet involves. In this peculiar position of my subject it will be perceived by all those who have paid any attention to the science of Electrical Psychology, that it is of most paramount importance to the human race, as a curative agent, and should, therefore, be understood by all, so far, at least, as to apply it successfully to the removal of disease and pain. It should be practically understood by all medical men. This will cost them only the trifling sum of ten dollars, and in the course of their practice it would be worth thousands to them, and at the same time afford them the supreme pleasure of having saved many a life, where medicine must have failed. To obtain a good knowledge of this science will require about FIVE

LESSONS OF TWO HOURS EACH; and as I am now permanently settled in New York city, I am ready to impart these instructions to all persons of *good moral character* who may call. If persons at a distance will form a class sufficiently large to warrant the expense, and address me a letter at New York, I will visit them one week, and not only give private instructions to the class, but will deliver, in the mean time, five public evening lectures besides, and perform most interesting experiments, of which the class may have the profit of the admission fee. This would generally pay their tuition, and in many instances exceed it.

I make this proposal, because hundreds of ignorant individuals have undertaken to lecture upon, and even to teach this science, who have never received any instruction from me, either verbal or written. These persons pretend to teach it, and that, too, for any price they can obtain, from five dollars down to twenty-five cents! They had better receive "*a penny for their thoughts*," so as to adapt the price of tuition to the amount of information they impart. All the regular students to whom I have taught the science of Electrical Psychology have been laid under written obligations, and have seriously pledged their sacred honor never to teach it under ten dollars. Those, therefore, who are qualified teachers and honorable men do still continue to adhere to the obligations they signed, and charge the original fee. Those who vary from it have either forfeited their obligations, or else never learned the science as they ought; and hence the public will know who and what they are.

It is due to myself to state, that some have changed the name of this science to that of "ELECTRO BIOLOGY," and have claimed authorship as to its discovery, and have even stated that Electro Biology has no connection whatever with Electrical Psychology, but is an entirely distinct science. This I am compelled to give a most decided and unqualified denial. I have visited some of the principal places where the Biologists have lectured, and have gathered all the facts in relation to their proceedings and the character of their experiments. I am acquainted with its whole history, and the circumstances under which it received its name, and why Electrical Psychology was first called "*Electro Biology.*" Should I, in a future day, be compelled in self-defense to take this subject in hand, I shall make all the necessary disclosures, which the interest and advancement of this science may require, or justice and duty demand. For the present they must rest in my bosom till circumstances shall call them forth. I would now only say, that the science of *Electrical Psychology is identical with that of Electro Biology, and that the latter has no existence only what it draws from the former, unless it be the mere half of its name.*

I have already stated, that there are certain individuals who have gone through the country lecturing, and pretending to teach this science for one or two dollars, and even for twenty-five cents, when they could get no more, who are utterly ignorant of the human system—ignorant of those diseases that assail it, and ignorant of the common principles involved in any of the sciences. Such may be able to inform you how to close a man's eyes—how to paralyze or move his limbs, and how to make a psychological impression on his mind. But how can they teach any one its philosophical application to disease, or to any useful medical purpose? Every man of common sense must perceive that this is impossible without the knowledge of science in general. Such incompetent individuals have done Electrical Psychology a serious injury, and in several places have brought it into disrepute.

Under all these circumstances, I feel it my duty to put an end to the worse than useless labors of such individuals, by fully explaining the secret mode of operation—how an individual may be controlled by mental and physical impressions. I would not be understood that this can be wholly done by language. It requires a visible and personal application of what the theory involves—a practical illustration as to performing experiments, and how to apply it successfully to disease. I will, however, do it faithfully, so far as language can accomplish it, and far beyond what any lecturer now in the field attempts to explain to his class of pupils. The most have failed to give satisfaction to those whom they have undertaken to instruct, and in many cases serious difficulties have occurred in relation to the sum paid for instruction. I have therefore come to the conclusion not to suffer odium in future to be brought upon this science, if in my power to prevent it. I proceed, therefore, to give the instructions to all, so that they may know how to experiment upon their fellow-men, as well as those generally who go about as lecturers and teachers of this science. In the accomplishment of this I shall be brief as possible. What requires ten hours of instruction can not, by any means, be communicated fully in two lectures of half an hour each. Yet I will embody all, and even more than is generally given to any class of pupils by those claiming to be teachers.

I would, in the first place, remark, that the Creator has stamped simplicity, as far as possible, upon each separate part of the human system. As I remarked in my sixth Lecture, each organ of the body performs but one function. The eye sees, the ear hears, the olfactories smell, the glands taste, the heart throbs to regulate the blood, the hands handle, the feet walk, the liver secretes its bile, and the stomach digests its food. The eye never hears, and the ear never sees. So there evidently is but one nerve or set of nerves through which impressions from the external world are communicated to the mind. This is certain, because the mind can receive but one idea at a time. It is immaterial how rapidly soever ideas may be transmitted to the mind, they are nevertheless successive, and two ideas can not possibly be conceived, at the same instant, by the mind. One must succeed the other. But as there are millions of nerves in the human brain, and if it were alike the office of each to communicate ideas to the mind, then as many millions of ideas as there are nerves might be transmitted to the mind at the same instant. But we are conscious that they are successively and not simultaneously conceived. We can not attend to two public speakers at once, so as to understand their ideas, if both were before us, and each addressing us upon a different subject. With the same earnestness that we give heed to the one, we must neglect the other. Indeed, there can be no doubt in relation to the fact of ideas being successively communicated to the mind, if we reflect that even one public speaker by too rapid a delivery often confuses the hearer.

The mind, as a living being of embodied form, has its spiritual brain and spiritual organs answering to the correspondent phrenological organs of the physical brain through which it manifests itself. The latter are, indeed, a production from the former, as much so as the plant and its form are a production from the life of the seed. The nerve, or family of nerves, through which impressions are communicated to the mind, and by the mind to the body, to move its various parts, is located in the organ of Individuality. All the organs of the brain, and, indeed, of the whole system, are double, and so are the senses likewise. The brain has its two hemispheres, its two eyes, two ears, two glands of taste, and two olfactories of smell. We have two hands, two feet, and the heart has its two auricles and two ventricles. The organ of Individuality is also double. It is located in the centre of the lower part of the forehead, sends off branches to the optic, auditory, and olfactory nerves—extends through both hemispheres of the brain, passes down the spinal marrow, and in its course sends off branches to the arms and lower limbs, and, indeed, to all the voluntary parts of the body. Hence all voluntary motion originating in mind is communicated to the organ of Individuality, and from thence is transmitted through correspondent nerves to that part of the body where the mind directs motion to be made. Hence the organ of Individuality is the one that constitutes our individualism, or personal identity, and by which we identify all individual objects in the external world. And though this organ, like all the other phrenological organs of the brain, is made up of a congeries of nerves, yet I am satisfied that it has but one single identical nerve that is moved by a mental impression, and that one moves by sympathy the whole family of nerves dwelling in that organ; and thus motion is communicated to every voluntary department of the body where the mind, as the motive power, directs.

For illustration of the above, suppose a pebble were thrown into the centre of Lake Superior. It would displace its waters, and produce a circle. That circle would produce a *second*, and that *second* would produce a *third circle*, and so on, each continuing to lessen in its action until it apparently died away. But though imperceptible to the naked eye, yet the successive action would be continued even to the distant shores, and move every drop of water from the centre to the circumference. And not only so, but that pebble would displace, by sympathy, every particle of water in the basined lake, even to its greatest depth. This is evident, because if a rock, half the size of that mighty lake, were thrown into its centre, the universal disturbance of every particle of water would be evident and perceptible. On the same principle, a pebble—yes, a single grain of sand—would produce the same result, only on a smaller scale. So the centre nerve (if I may so speak) of the organ of Individuality is moved by a mental impression, and this movement communicates motion by sympathetic impulse to each and every voluntary part of the body where the mind directs. Is not this the true philosophy of what we call *sympathy* existing between the different parts of the human body and the various attributes of the soul, and between one individual and another? And is not this the true philosophy of *personal identity*, on the mystery of which so much has been written? Did not the mind of man possess a *spiritual* organ of Individuality corresponding to the *physical* one of the brain, how then could either personal identity or sympathy be recognized, or even exist? This one spiritual organ constitutes the unity of all the attributes of the mind, spirit, soul, or whatever you please to call that part of man which is to exist immortal in a future world. The phrenological organs of the human brain are but a daguerreotype manifestation—a result of the correspondent spiritual organs of the living mind. They constitute the physical apartments of the earthly house which is fitted up as a temporary residence for the invisible inhabitant within, during its continuance here.

Having clearly placed before you those interesting points that involve the ever sweet and pleasing doctrine of sympathy, I will now proceed to instruct you how an individual can be *electrically* and *psychologically* controlled. This is a subject involving vast utility as a curative power to the sick and distressed, and is therefore full of deep and stirring interest to every feeling heart. To control is to cure. In order to affect an individual, and to successfully control his mind and muscles, it is, in the first place, necessary that he should stand in a negative relation to the operator as to the doctrine of impressions. Some persons are naturally in this condition, were born in it, live in it.

and will die in it. Others are not in this state, and hence means must be used to bring them there before they can be controlled. In order to determine whether an individual stands in this negative relation to yourself, as the operator, you must first proceed to take the communication, as we term it. This is invariably and philosophically done through the medium of two points. I care not whether it be effected by visible contact or otherwise, it is still done through the medium of two points, or the negative and positive electric forces, and through the same nerve, or family of nerves, that constitutes, phrenologically, our individualism or personal identity.

Before I proceed to notice the most easy, sure, and direct mode by which an electro-psychological communication may be established, I will, in the first place, speak of the philosophy of communication in general. It is evident that the *positive* and *negative* forces of the two electricities pervade all nature. These I call in my seventh Lecture the *male* and *female* electricities. These two forces not only permeate, more or less, all substances in nature, but they also unceasingly emanate from them in electric circles. Hence, as man is a part of the universe, he constantly takes into his system large portions of electricity with the air he inspires, with the water he drinks, and with the food he eats. And by mental and muscular action, and the common operations of animal life, he unceasingly throws it off through the nervous force. On passing from his system into the surrounding elements, it forms around him his electric or magnetic circle. How large this circle may be is as yet to us unknown. Hence, when two individuals come within a certain distance of each other, their circles meet, and touch each other at two points. And if one of these individuals is in the electro-psychological state, the communication will be taken through the positive and negative forces. And though this communication was taken without personal contact, yet it was done through the nerve that constitutes our individualism or personal identity. A communication in this manner can be established with those persons only who are very sensitive. As only about one in twenty-five is naturally in this state, so I can step before an audience of a thousand persons, state to them what I intend to do, so that all shall understand me; then request them all to close their eyes firmly, and say, *You can not open your eyes!* and forty out of the thousand will be unable to do so. All this can be performed in five minutes after entering the hall.

It is, however, certain, that no effect can be produced till you establish a thorough communication between yourself and the subject through the nervous force of the organ of Individuality that constitutes his personal identity. And as the centre or moving nerve of this organ has sympathy with all the voluntary nerves of the system, and as they reciprocally affect each other so you can establish a psychological communication by touching any part of the system where voluntary nerves are located, and particularly of those individuals who are very sensitive and impressible. But the most natural mode to get a good communication, and the one least liable to be detected by the audience, is to take the individual by the hand, and in the same manner as though you were going to shake hands. Press your thumb with moderate force upon the ULNAR NERVE, which spreads its branches to the ring and little finger of the hand. The pressure should be nearly an inch above the knuckle, and in range of the ring finger. Lay the ball of the thumb flat and partially crosswise, so as to cover the minute branches of this nerve of motion and sensation. The pressure, though firm, should not be so great as to produce pain or the least uneasiness to the subject. When you first take him by the hand, request him to place his eyes upon yours, and to keep them fixed, so that he may see every emotion of your mind expressed in the countenance. Continue this position and also the pressure upon this *cubital nerve* for half a minute or more. Then request him to close his eyes, and with your fingers gently brush downward several times over the eyelids, as though fastening them firmly together. Throughout the whole process feel within yourself a fixed determination to close them, so as to express that determination fully in your countenance and manner. Having done this, place your hand on the top of his head and press your thumb firmly on the organ of Individuality, bearing partially downward, and with the other thumb still pressing the ULNAR NERVE, tell him—*you can not open your eyes!* Remember, that your manner, your expression of countenance, your motions, and your language must all be of the most positive character. If he succeed in opening his eyes, try it once or twice more, because impressions, whether physical or mental, continue to deepen by repetition. In case, however, that you can not close his eyes, nor see any effect produced upon them, you should cease making any further efforts, because you have now fairly tested that his mind and body both stand in a positive relation to yours as it regards the doctrine of impressions.

There is yet another mode of communication that I have discovered, which is far preferable to the one just noticed, is supreme over all others, and will remain so till Omnipotence shall see fit to change the nervous system of man. This is the MEDIAN NERVE, which is the second of the brachial plexus. It is a compound nerve having the power of both motion and sensation. It is located in the centre of the upper part of the palm of the hand near where it joins the wrist. In order to take the communication through this medium, you must take the subject by the hand with the palm upward, and place the ball of your thumb in the centre of his hand near the root of his thumb, and give a moderate but firm pressure. The astonishing nature of the impression can only be equaled by the result produced. It is a nerve of voluntary motion as well as sensation, and therefore belongs to, and has its origin in, the cerebrum. True, like the other nerves, it can be traced directly no farther than the spinal cord, yet there is no difficulty in determining its origin to be in the cerebrum, because that is the organ of all voluntary motion, even as the cerebellum is the organ of all involuntary motion. This mode of communication transcends all others, and will answer in all possible cases, even upon persons the most difficult to control, as well as upon those who are the most sensitive and impressible. I care not how you obtain the communication with an individual—whether it be without contact, or by touching any part of the body, yet the communication must ultimately be established through the MEDIAN NERVE as the centre telegraphic force from the organ of Individuality, through which organ all ideas and all impressions are transmitted from the external world to the mind, and through that same organ are transmitted by the volitions of the mind to the different parts of the body. Even if the communication is taken by pressure on the *ulnar nerve*, yet it is nevertheless communicated by sympathy to the MEDIAN NERVE, and through which alone the communication becomes perfect. There is no question, in my mind, that the *optic*, the *auditory*, and the *olfactory* nerves, as well as those of taste, are but branches of the same common nerve by which impressions or ideas are transmitted to the mind through the organ of Individuality. Those whom I have instructed, will please to remember this. I desire you, and all, in order to experiment with power, to keep up a perfect uniformity in taking the communication through the MEDIAN NERVE, and through this to transmit the electric current to the brain and electrify the body.

I am aware that the exact location of this nerve is somewhat difficult to find, unless you are personally instructed. If you succeed in closing the subject's eyes by the above mode, you may then request him to put his hands on his head, or in any other position you choose, and tell him, *You can not stir them!* In case you succeed, request him to be seated, and tell him, *You can not rise!* If you are successful in this, request him to put his hands in motion, and tell him, *You can not stop them!* If you succeed, request him to walk the floor, and tell him, *You can not cease walking!* And so you may continue to perform experiments involving muscular motion and paralysis of any kind that may occur to your mind, till you can completely control him, in arresting or moving all the voluntary parts of his system. When this is accomplished, we say, for the sake of convenience, *he is in the electrical state.*

You may, perhaps, not be able to affect him any further; and as you can not know how this matter stands without the trial, so you will next proceed to produce mental impressions by operating upon his mind only. If he is entirely in the state, you can make him see that a cane is a living snake or eel; that a hat is a halibut or flounder; a handkerchief is a bird, child, or rabbit; or that the moon or a star falls on a person in the audience, and sets him on fire, and you can make him hasten to extinguish it. You can make him see a river, and on it a steamboat crowded with human beings. You can make him see the boiler burst, and the boat blow up, with his father or mother, brother or sister, or wife or child on board. You can lay out the lifeless corpse before him in state, cause him to kneel at its side, and to freely shed over it the tears of affection and bereavement. You can suddenly show him a boy or girl, and he sees in them the lost father or mother standing before him, and gives the warm embrace. You can change his own personal identity, and make him believe that he is a child two or three years old, and inspire him with the artless feelings of that age; or that he is an aged man, or even a woman, or a negro, or some renowned statesman or hero. You can change the taste of water to that of vinegar, wormwood, honey, or of any liquors you please. In like manner you can operate on his hearing and smelling, as well as on his sight, feeling, and taste. When you can produce such mental hallucinations as these on all his senses, or thousands of others that may suggest themselves to your mind, we say, for the sake of convenience, that he is in the *psychological state.*

I have thus far confined my remarks to that class of individuals who are *naturally* in the electro-psychological state, and shown you clearly how a communication in its various modes may be taken, so as to successfully control them both physically and mentally. The average number of persons in the United States who are naturally in the psychological state is about one in twenty-five. These can be cured of any functional diseases with which they may be assailed, by simply performing upon them the experiments I have just named, or any others of a like character. And not only so, but upon such any surgical operation may be performed without the slightest degree of pain, and that, too, while they are wide awake, and in perfect possession of all their reasoning faculties. But while only one in twenty-five is entirely in this state, and naturally so, yet there is, perhaps, one in twelve who is partially in the state, and on whom experiments can be performed to a greater or less extent. All these, in connection with those on whom you can produce no effect whatever, are to be subjected to a process to bring them into the electro-psychological state, and we see, too, how vastly important it is that this, if possible, should be done. This, indeed, would be the noblest triumph ever achieved by man. It would be a triumph over disease and pain, and prepare the human race to wear out with age.

In order to bring about this result, I know, at present, of no better process than the following: Take pure zinc and silver, with a copper wire, as a conductor, passed through the zinc, so as to come in contact with the silver. For convenience, take a piece of zinc the size of a cent, but somewhat thicker, and imbed a five-cent piece in its centre, and pass a small copper wire, as a rivet, through both. Place this coin in the palm of the hand, with the silver side up, and request him to bring it within about a foot of his eyes. Let him take a position, either sitting or standing, which he can retain twenty minutes or more, without any motion of his feet, hands, lips, head, or any part of his body. He must remain motionless as a statue, except the natural winking of the eye. His mind should be perfectly resigned and kept entirely passive to surrounding impressions. The eyes should be placed upon the coin as though they were riveted there, and during the whole twenty or twenty-five minutes they should, on no consideration, be raised to look at any person or object whatever, and the spectators should be still as the grave. If the eyes have a tendency to close, he should not strive to keep them open, but let them close. Follow nature. In a public audience, when lecturing, you should seat, if possible, a class of thirty persons. When the time has expired, collect your coin so as relieve the class from their wearisome position, and then try each individual, always taking the communication in the manner I have described, and proceed to experiment upon them the same as you do upon those who are naturally in the state. If one sitting do not bring them entirely into the psychological state, then let it be repeated on the next evening, and so continue on till the work is consummated. All, with few exceptions, can be, by perseverance, brought into this state. Some are naturally in it—some are brought into it by *one sitting*—some by *two*—some by *three*—and some may require a *hundred sittings* of half an hour each before they can be brought to the participation of this inestimable blessing. No two individuals are alike impressible in any thing whatever, whether it be mental effort, moral power and moral suasion, or physical endurance. Hence we should not be surprised, that they all differ from each other as to nervous impressibility in this science, and that, too, in the same ratio as they may differ in their phrenological developments and cerebral excitability. It is enough for us to know on this point that no two individuals are in any respect exactly alike.

Having described the electro-magnetic coin which I conceive to be the best, under all circumstances, to produce the result, and having directed you how to use it, I would now apprise you, that this state may be induced by other substances as agents in nature. It may be induced by fixing the eyes upon a piece of zinc alone, and observing the directions already given. It may be induced by a piece of silver, or a piece of copper, iron, lead, or any other metal. It may be induced by a piece of wood, or any other substance in nature. Or it may be done by a mere mental abstraction, with no substance, only the surrounding elements. But when no substance is used, the process to the state is slow and tedious. Then, again, there is every possible grade of power from the feeblest substance placed in the hand up to the galvanic battery, which is more powerful than the coin I have adopted as a matter of convenience and utility. The galvanic battery I should prefer, if it could be carried in the pocket, or be accessible to all. If thirty persons should join hands, and the two individuals at the extremes of the line each take a handle of a galvanic battery, and let the current be so graduated as to be but faintly felt, and a greater number would be affected than by any other agent that could be employed. In this case, as in all others, it is to be understood, that the same stillness of muscles, the same fixed position of the eye upon some object or spot, and the same passivity of mind are to be strictly observed.

The query may now arise in the minds of some of the class—Why should all substances in existence have a greater or less tendency to produce this state? I answer, that electricity is the great and universal agent ordained by the Creator to form, to transmute, or to decompose all substances that swarm in the empire of nature. Hence all substances in existence throw off a never-ceasing electro-atmospheric emanation in a greater or less degree, otherwise they could never change. And these emanations by their impressions more or less affect all human beings according to the relative position in which they may be placed to receive and feel the force of such impressions. Therefore sleep and wakefulness, health and sickness, pain and ease, and all the various sensations and changes to which the human system is subject, are experienced. Hence when we fix our attention upon one substance, and become mentally and physically passive to surrounding impressions, we render ourselves, by this volition, relatively *negative*, as far as in our power, to the *positive* force of the substance with which we are engaged, and drowsiness, or some other cerebral change or phenomenon ensues, because by passivity the electro-nervous fluid is supplied through the lungs and stomach for the brain more freely than it is thrown off. But when we resume the activity of our mental and physical energies, we, by this volition and action, become relatively *positive* to the surrounding impressions of all substances in nature, and wakefulness, with all its attendant delights, is the result, because by mental and muscular action we throw off from the brain the electro-nervous fluid more rapidly than it is supplied through the lungs and stomach.

In order, therefore, to render the subject as simple as possible, and to establish and perpetuate a uniformity of procedure in the use of a substance to be placed in the hand, I desire you to insist upon the electro-magnetic coin as being alone sufficient, under the directions given, to induce the state. And I desire you to insist that the pressure on the MEDIAN NERVE is alone sufficient to establish a communication between the operator and the subject to perform all the experiments, both electrical and psychological, that this science may involve. Indeed, all substances, so far as their electro-emanating power extends, produce the same effect in degree as the coin I recommend. Hence, strictly and philosophically speaking, the electro-magnetic coin, as the true mode of inducing the state, is all in all. And as all possible modes of obtaining communication, whether by contact or otherwise, must meet in the organ of Individuality, through which all impressions are transmitted to the mind, and from the mind, through that same organ, to all the voluntary parts of the body, so there is strictly and philosophically speaking but one mode of taking communication, and hence the MEDIAN NERVE is all in all. If, however, you could remember the exposition I have given you on this intricate and interesting subject, you would then find no difficulty in defending yourself against the assaults of skeptical men. But as it is, I must leave you with the two simple forms I recommend—the ELECTRO-MAGNETIC COIN and the MEDIAN NERVE.

As the general points of the subject are now distinctly before you, I would next state, that we divide this science, for the sake of perspicuity, into FIVE PLANS. The first *three* regard the mediums through which persons are brought into the electro-psychological state. The *first* is through Mesmerism. Hence you will call Mesmerism plan NUMBER ONE. The *second* is the pressure on the nerve by which we detect those who are naturally in the electro-psychological state. This you will call plan NUMBER TWO. The *third* is the coin by which others are to be brought into this state. The coin you will therefore call plan NUMBER THREE. The *fourth* involves all the experiments, whether *electrical* or *psychological*, as a sanative agent, by which those who are already in this state are to be relieved of pain, cured of disease, or prepared for any surgical operation without suffering. This you will call plan NUMBER FOUR. And the *fifth*, in order to cure the diseases of those who are not in the state, involves the application of physical impressions upon their bodies, and the administering of remedies, whether externally or internally applied. This you will call plan NUMBER FIVE. On each of these five plans I now proceed to impart all the necessary information, and in as clear and concise a manner as possible.

In regard to Mesmerism, which is plan NUMBER ONE, I would say, that if you desire to mesmerize a person, who has never been put into the state, nor in the least affected, I know of no better mode than to seat him in an easy posture, and request him to be calm and resigned. Take him by both hands, or else by one hand and place your other gently on his forehead. But with whatever part of his body you may choose to come in contact, be sure to always touch two points, answering to the *positive* and *negative* forces. Having taken him by both hands, fix your eyes firmly upon his, and, if possible, let him contentedly and steadily look you in the face. Remain in this position till his eyes close. Then place both your hands on his head, gently pass them to his shoulders, down the arms, and off at the ends of his fingers. Throw your hands outward as you return them to his head, and continue these passes till he can hear no voice but yours. He is then entirely in the mesmeric state.

The reason why I desire you to throw your hands outward on returning them to his head when making the passes is, to avoid waking him by passing them upward in front and near to his body. It is a well-known fact, that by the downward passes of an electro-magnet, attached to a galvanic battery, the steel magnet becomes instantly charged so as to lift a pound of iron. But by the upward passes it becomes instantly demagnetized so that it will lift nothing. By the downward passes I mean from the bow or centre of the magnet to the extremities, and by upward passes I mean the reverse, regardless of the position in which the magnet may be held. The same applies to the human being when his mind is left uninfluenced. But if you apprise the subject when in the magnetic state, that the upward passes will not awake him, then by the force of his own mind he can retain his condition, in defiance of all the passes you may make. The mind, when in the mesmeric state, has the power of appropriating electricity or magnetism to itself, or of rejecting it, at pleasure.

In case, however, that the person whom you seat to be mesmerized is not affected, and feels no inclination whatever to close his eyes after fifteen or twenty minutes' trial, you will still proceed, as directed, to make the passes, and continue them also for fifteen or twenty minutes. Then take him again by the hands, as at first, and continue this position about the same length of time, then resume the passes, as before directed, and continue these two modes of operation alternately till about an hour is consumed at a sitting. Before you leave him, reverse the passes for the space of a minute or so, as though waking him up, even though you see no visible effect produced. On the next day, give him another sitting of an hour; and so on, day after day, till you get him into the mesmeric state. Remember, that all the influence you produce upon him at one sitting, however minute or imperceptible it may be, he fully retains to all subsequent daily sittings.

When a person is in the mesmeric state, whether put there by yourself or by some other one, take the communication by NUMBER TWO and awake him by the upward passes; or else do it by an impression, as follows: Tell him, "I will count *three*, and at the same instant I say *three* I will slap my hands together, and you will be wide awake and in your perfect senses. Are you ready?" If he answer in the affirmative, you will proceed to count—"*One*, TWO, THREE!" The word *three* should be spoken suddenly, and in a very loud voice, and at the same instant the palms of the hands should be smitten together. This will instantly awake him. Those who are thus aroused from mesmeric slumber to wakefulness are, with few exceptions, in the electro-psychological state, and you can immediately proceed to experiment upon them. Here, then, is an individual who was brought into this state through NUMBER ONE, and he stands in a negative relation to you as it regards the doctrine of impressions, and his body is principally charged with *negative* electricity, which is from the earth, and which alone is susceptible of being successfully controlled.

Having given you all the necessary directions how to mesmerize, and how to bring a person into the electro-psychological state through NUMBER ONE, and shown the relation in which he stands to you as the operator, I now proceed to instruct you in relation to NUMBER TWO. This can be done in a very few words, as it has been already pretty fully noticed. In the first place, you may go into a public audience, or among your social friends, and take one individual after another by the hand, press the MEDIAN NERVE, as I have directed, and if you succeed in controlling some one, both physically and mentally, then such individual is recognized as in the electro-psychological state through NUMBER TWO. Though this person has never been mesmerized, nor operated upon, yet he is found to be naturally in the same state, through NUMBER TWO, as is the individual who was brought into it through NUMBER ONE. Seat them side by side, and they both feel the same nervous sympathy toward each other, are both charged with the same negative electricity, and both stand in a negative relation to you as it regards the doctrine of impressions.

Take NUMBER THREE, which is the electro-magnetic coin, and place it in the hand of an individual whom you can not affect, as you did either of the persons mentioned, and subject him to the process of looking at it as I have directed. When the time of the sitting has expired, take the usual communication, NUMBER TWO, and in case you can control him, both physically and mentally, he is recognized as brought into the electro-psychological state through NUMBER THREE. Here, then, are three individuals in the same state of nervous impressibility, charged with the same negative electricity, stand in the same negative relation to you, as it regards the doctrine of impressions, and by the same impression they can all be controlled, collectively or separately. They are all in the electro-psychological state, but were brought there through *three different plans.* But by whatever means individuals may be brought into this state, yet bear in mind, that through NUMBER TWO, either with or without contact, you take the communication, which is the secret, invisible, and subtile link of controlling power, and without which no effect whatever can be produced. Every principle of philosophy is based upon *cause*, *medium*, and *effect* Even the Creator himself, were he completely isolated from this globe, could produce no possible effect upon it, nor upon the inhabitants of its surface, because there would be, in such case, no medium of communication by which he could come in contact with it, or in the least affect its animal and vegetable kingdoms. Touch what nerve you please, or obtain the communication, with or without contact, as you may—I care not how, yet it must be transmitted to the brain through the MEDIAN NERVE to the organ of Individuality, and from thence to the mind. Even if you press the *ulnar nerve* yet it must be by sympathy communicated from this to the MEDIAN NERVE, which is much larger, runs parallel along the arm with it to the spinal cord, and from thence they both unquestionably pass to the organ of Individuality in the cerebrum. They are both compound nerves, by which we mean, that they are both susceptible of voluntary motion and sensation, being connected with the mind as its agents to transmit the *electro-nervous fluid* to and from it, and through *which* it holds a correspondence with the external world. Through *this* it receives by impressions its messages, and through this by impressions it returns its answers. To take the communication, therefore, by acting directly upon the MEDIAN NERVE is far preferable to any other mode, and particularly so upon persons who are not very sensitive or impressible. The more remote we take our communication from this nerve, the longer we must labor to get control, and perhaps often fail, and the more feeble will be our action and impression in producing any interesting, brilliant, and startling experiments. The next best mode to get a communication is, as I have uniformly taught, through the ULNAR NERVE, and is the best mode to conceal the secret from others.

I have now briefly noticed the first THREE PLANS, through which individuals may be brought into the psychological state, and the subtile medium of communication through which they may be controlled by mental impressions. In regard to plan NUMBER FOUR I would remark, that as it involves *all* the experiments, both electrical and psychological, and as I have already sufficiently noticed these in giving directions how to perform them, so this part of my subject has been anticipated, and is fully before you. Permit me, however, to remark, that it may be well for you to know *why* these experiments are conducive to health, and how it is possible to perform an operation without pain, when the patient is wide awake and in his perfect senses. These two points I will now philosophically explain.

Why the experiments, when properly conducted, are conducive to health, is because the mind, by coming in contact with the electricity of the nerves, moves it with a force equal to the impression which the operator makes on the patient, and sends it to that part of the system to which the patient's attention is directed. Under its energy the limbs are paralyzed, so that the subject, by all his exertions, is unable to walk, nor when walking is he able to stop, and when seated it is not in his power to rise. His arms, in an instant, are paralyzed, so that he can not move them, or they are set in motion, and he has no power to stop them. By a mental impression he is made to see his clothes on fire, or the house falling, and his limbs crushed to pieces. Or he is made to see a lion, a tiger, or a huge serpent close in pursuit to devour him. Or, at pleasure, he may be wrought up to the most supreme ecstasy of joy and delight, or be made to feel, in the extreme, any other emotion or passion of the soul. These various impressions throw the electricity of the nerves to every part of the system with such power as to burst through all functional obstructions, equalize the nervous force, and also the circulation of the blood, and thus remove disease and still pain. It is a well-known fact in medical jurisprudence, that such supreme and sudden excitements have often cured rheumatism, and made even the lame walk.

On plan NUMBER FIVE, which involves the cure of persons who are not in this state, I can say but little. It embraces physical action upon their bodies, according to the nature of the disease, and impressions upon their minds so far as it is possible to produce them. It involves external applications or internal remedies, as the case may require. In a word, it involves the excellences of all medical systems in being, and sums them all up in the supreme beauties of one bright and glorious system, and that system is Electro-Curapathy. I now turn to the consideration of the last point I promised to notice.

The true philosophical cause, why a tooth can be extracted, or a surgical operation performed, without pain, is, that all feeling or sensation is in the mind, which holds its residence in the brain, and which, as a living being of immortal form, has its spiritual hands, feet, and organs corresponding to those of the body. Indeed, the body, in all its complicated organism, is but a visible daguerreotype picture of the invisible spirit in the brain, and from which it has drawn all its lineaments of form. Strictly speaking, the body itself has no feeling. If you touch, for instance, the point of a needle to the forefinger, it irritates some minute branch of a nerve of sensation. This irritation disturbs the electricity of the nerve that serves as a telegraph wire along which the disturbed electricity passes, and a shock is produced upon the identical correspondent spot of the forefinger of the spirit, disturbs the harmony of its own beautiful movements in its spiritual sphere, and this impression produces pain.

If, then, the communication between the mind and the electricity of the nerve to which you touched the needle could be cut off—if the telegraph wire should be so impaired, that the electricity could not pass to the mind to shock it, then no pain could be felt. This is always the case in palsy, when the nerves of sensation are paralyzed. Amputation could then be performed without pain. Now, excitement will cause the same insensibility to suffering and pain, if the impression be sufficiently great to produce it. This is evident, because as there is, in the human system, but a certain amount of feeling, therefore in the same ratio that you excite one part to sensibility the other parts are so far robbed. The following anecdote related to me of Henry Clay will illustrate this. It is as follows:

A gentleman on the floor in Congress, in his speech, made a severe personal attack on Henry Clay. Mr. Clay was, at the time, very much indisposed, and considered unable to speak. He whispered to the gentleman who sat next to him, and said, I must answer him, but beg of you not to let me speak over half an hour. He commenced, and was soon on wing—soaring, and uniting the language of earth and heaven in his defense, till every period seemed to shake the universe. He was aroused—was excited—his brain stirred proudly. His half hour expired, and the gentleman pulled his coat, but Clay paid no attention to the signal. He kicked his limbs, but it made no impression. He run a pin several times half its length into the calf of his leg. Clay heeded it not, spoke two hours, sunk exhausted into his seat, and upbraided the sentinel for not stopping him! He had felt nothing. Excitement called the electricity of his system to his brain, and he threw it off by mental effort. In the same degree that sensation was called to his brain the limbs were robbed.

Dr. Channing, in his sermon on the burning of the steamboat Lexington, when so many lives were lost, most eloquently explains this very point. He says:

"We are created with a susceptibility of pain, and severe pain. This is a part of our nature, as truly as our susceptibility of enjoyment. God has implanted it, and has thus opened in the very centre of our being a fountain of suffering. We carry it within us, and can no more escape it than we can our power of thought. We are apt to throw our pains on outward things as their causes It is the fire, the sea, the sword, or human enmity, which gives us pain. But there is no pain in the fire or the sword, which passes thence into our souls. The pain begins and ends in the soul itself. Outward things are only the occasions. Even the body has no pain in it, which it infuses into the mind. Of itself it is incapable of suffering. This hand may be cracked, crushed in the rack of the inquisitor, and that burnt in a slow fire; but in these cases it is not the fibres, the blood-vessels, the bones of the hand which endure pain. These are merely connected, by the will of the Creator, with the springs of pain in the soul. Here, here is the only origin and seat of suffering. If God so willed, the gashing of the flesh with a knife, the piercing of the heart with a dagger, might be the occasion of exquisite delight. We know that, in the heat of battle, a wound is not felt, and that men, dying for their faith by instruments of torture, have expired with triumph on their lips. In these cases, the spring of suffering in the mind is not touched by the lacerations of the body, in consequence of the absorbing action of other principles of the soul. All suffering is to be traced to the susceptibility, the capacity of pain, which belongs to our nature, and which the Creator has implanted ineradicably within us."

I close by remarking, that as the science of Electrical Psychology is the doctrine of supreme impressions, so you will readily perceive why a surgical operation can be performed without pain.

LECTURE XII.

[The following Lecture upon the science of GENETOLOGY, which was then called NATALOLOGY, was delivered, by request, to the Ladies of Troy, N. Y., in the Morris Place Hall, in February, 1844. And, as it belongs to the subject of Electrical Psychology and the great doctrine of impressions that this science involves, it is here inserted in its appropriate place. The Author has generally delivered it as the last lecture of the course, to his private classes, when giving them instructions in Electrical Psychology.]

LADIES:

THE purpose for which we are now assembled is to take into consideration the science of GENETOLOGY or HUMAN BEAUTY, as founded upon the *doctrine of impressions*. I contend that the human species can be gradually improved through the harmonious operation of mental impressions, exercised by the mother, and that the time will come when they will be born into existence with just such lineaments of form as we may choose. This is no idle dream—no infatuation of a disturbed brain, but sober reality. Human Beauty has been, in all ages, admired, praised, loved, and desired by the millions of our race. Its charms have been sung by the poet in thoughts that burn; have taxed the finest conceptions of the artist and the sculptor, and have been made to breathe upon the canvas, and to speak in the marble. The charms of Beauty have been dwelt upon, and painted by the eloquent orator, and have moved the hearts of all human kind. All know and feel the power of Beauty, and ardently covet the gem.

The subject now to be considered is, whether, through the power of the mental impressions of the mother, her unborn child, during the period from conception to birth, can be moulded into beauty, and born into existence with those admirable lineaments of form that so much delight the beholder. To the candid consideration of this interesting subject I now invite attention.

That the mother can greatly affect her unborn child is unquestionably true. No one will deny, that by some sudden impulse of mind—such as extreme fear or joy, she has often produced abortion, or else greatly injured her offspring. I know of one well-authenticated case, where the mother was extremely terrified at a young cub when she was about three months enciente. It was her twelfth child, and was born an idiot, while her other eleven children were intelligent and active. It was a boy. He lived to fourteen years of age, and had many actions peculiar to the bear. There are instances, too numerous to mention, where human beings have not only acted like, but even resembled, some species of the brute or bird race.

And as the uniform testimony of mothers is, that they were frightened during pregnancy by the creature to which the offspring was likened, so no other satisfactory cause ever has been assigned for the effect produced.

A wealthy lady, in Boston, was frightened by a parrot. Her daughter, now ten or twelve years of age, is a mediocre, and her voice and manner of speaking resemble those of this bird. A lady of my acquaintance, on seeing the head of her cosset lamb suddenly crushed, brought forth a son, about six months after this occurrence, whose temples were much pressed in, and the forehead protruded as did that of the injured lamb, yet his intellect was not in the least impaired. A singular circumstance occurred a few years ago in Bunkum County, N. C. A girl was there exhibited, who was born with only one leg and one arm. A lady who was about two months advanced in her time, had a strong desire to see this girl. Her curiosity being great, she examined the deformed object with long and unwearied attention. Her friends had to force her, as it were, from the exhibition. She went home, but the image of the unfortunate girl was but too deeply impressed upon her mind to be forgotten. She conversed about it by day, and it was the subject of her dreams by night. She at length got an impression that her child would be born like the object that haunted her brain. Her time of delivery came, and her fears were realized. She brought forth a daughter with only one leg and one arm!

How often it has occurred, where a lady has had a strong desire, or longing for wine, that she has communicated the color of the liquor by impression to her child. In like manner, through strong mental impressions, she has stamped upon the unborn child a strawberry, blackberry, grape, or any fruit for which she had an ardent longing, and made it perfect both as it regards its color and shape. Endless instances of this character can be produced, and also the uniform testimony of the mother that she had a longing desire for what appears upon the child. Against this, the arguments and objections of some medical writers and their adherents are of no weight, as they are evidently entirely ignorant of the electrical philosophy of this subject. The mental impression, or longing of the mother must, however, far exceed her usual impressions in order to produce this result upon her offspring.

I am not arguing any new truth, nor the discovery of any new principle of action, but what has been known from the earliest of human records. The Bible history admits the principle even in its application to the brute race. Laban deceived Jacob by giving to him Leah for a wife instead of Rachel, for whom he had served him seven years, by tending his flocks. He then proposed, that he should serve him seven years more for Rachel. To pacify Jacob, Laban offered him what he supposed to be a poor chance for wages. He told him, that all the speckled cattle should be his. But Jacob resorted to a plan by which he sufficiently punished the selfish spirit of Laban. He put speckled rods at the bottom of the watering troughs. He kept the male and female cattle apart. There is no question, that he allowed the males to have free access to water, but kept the females away till they were very thirsty, even bellowing and bleating for water. In this condition he allowed them to mingle only at the troughs. And as water is colorless, nothing but the speckled rods could be seen by the thirsty and drinking females, and under this strong impression they conceived. But this is not all. Jacob understood his subject sufficiently well to go over the same ground again the next day, and keep up the female herd till the same great thirst returned. This would bring to their minds what seemed to them a speckled fluid, and to those already conceived the impression would continue to deepen. True, Laban repeatedly changed the wages even up to ten times; but this was of no avail, because Jacob as often changed the scene of action by preparing the causes that must philosophically produce their corresponding results in the animal economy. Hence I again assert that I am not arguing any new principle of action. I claim no such discovery, but merely claim the discovery of its philosophy, and of having reduced it to a system capable of improving and ennobling our race.

Such are its facts, and I now turn to its philosophy. Gold can be dissolved in aqua regia. A five-dollar gold piece thrown into this liquid dissolves and soon disappears, only as the whole liquid assumes the color of the gold. Let this liquid be properly prepared, and dip the ends of the two wires of a galvanic battery into it. In this liquid you may then immerse any metallic article you please. Take, for instance, a silver watch-case with your own name engraved upon it, and many curiously wrought characters and devices; immerse this in the liquid, and the positive and negative forces of galvanic action passing from the battery through these two wires into the solution will seize the inconceivably fine particles of gold and lay them upon the watch-case as solid as though they had been melted there. You may continue this process until every particle of the half-eagle shall be placed upon the watch-case, and yet the perfect identity of your name, and all the marks and characters engraved upon it, will be retained. This is called galvanizing metals. A second copper bank-plate can be made from the original by galvanism, so that every letter and mark shall be exact, and the plate be a perfect fac-simile of the original. Hence we perceive that through the positive and negative forces of galvanism, which is but one form of electricity, a perfect identity is preserved.

We will now apply this great principle to the argument under consideration. The monthly evacuations of the female are a universal solvent in which are involved exact proportions of all the constituent elements of her body. This redundancy is given her by the Creator for the propagation of her race. As soon as she conceives, the womb closes up, and this same redundant compound of her being is secreted in the womb, as the fluid in which the fœtus is immersed and swims, and is the raw material out of which its body is to be manufactured. And while I am upon this point, permit me to remark, that as soon as the child is born this same redundant substance is carried through the lacteal secretions and manufactured into nourishment which the infant draws from its mother's bosom. Hence the menses are the prepared substance to produce the child's body in the womb, and to sustain it at the breast.

Through the galvanic action of the positive and negative forces of her involuntary nerves the fœtus is formed. These forces seize the elementary particles of this solution, and convey them to the conception, which is the nebulo-centre or nucleus to which they all tend, similar to the particles of gold in solution to the watch-case. Hence if a woman were to conceive while wrapped in total darkness, and never see the man by whom she conceived, nor get the most distant impression of his image, and could she, at the moment of conception, be consigned to a sleep of profound insensibility till the time of her delivery came, she would unquestionably bring forth an offspring exactly in her own image. It would be as perfect a fac-simile of her own organism, form, and features as the second bank-plate was of the first from which by galvanic action it was produced. But while the galvanic powers of her involuntary nerves, through the positive forces, are forming the new being in her own image, the voluntary nerves, through which the voluntary powers of her mind act, are also producing their effects by moulding the new being in the image of the person on whom her mind is most powerfully placed. Hence if her self-esteem is great, and she fancies herself superior to her husband, and has great self-love, and but little regard for him, she will often consult her mirror, and her child will most resemble herself notwithstanding the impression of her husband's countenance and the features of all others around her.

But if she, on the contrary, cherishes a warm and generous affection to her husband, and if he be far distant from home and exposed to dangers on land or ocean, her mind goes with him and lingers in imagination upon his image. The child is born, but it is in the likeness of its father. If her love and esteem toward herself and husband are about equally divided and balanced, the child will be a blended picture of the two. The opposite passions of hatred and dislike will produce the same result as it regards form of features and personal appearance. Or if the mother should entertain a very high regard for her minister, doctor, or any friend, and circumstances should occur to bring him frequently to her mind, her child would resemble him. Suppose her husband should be jealous of any of these, or of some boarder in the family whom she even hated, and charge her with conjugal infidelity, she would be inclined, under such circumstances, to keep her mind upon him in detestation, fear that her child might resemble him, and when born all her fears would be realized. Such circumstances have separated many a husband and wife, and broken up many a family when the wife was virtuous, and her honor unsullied and pure as the snowflake ere it falls.

In this view of the subject it will be seen that every countenance upon which the enciente mother gazes, and every object, whether animate or inanimate, presented to her view, has a tendency to produce an impression, either favorable or unfavorable, upon the fœtus. And as all form, motion, and power belong to, and exist in, mind, and can be communicated through electric action from the mother's mind to the fœtus, so when beautiful forms and pleasing sights are presented to her with sufficient power, she transmits them by a mental impression to the embryo being as a part of its future beauty. So, on the other hand, when horrid forms and fearful sights are presented to her mind with sufficient power, and as her mind now contains these deformities she transmits them also by mental impression to her child, and perchance effects its ruin.

If we contemplate all form, motion, and power as existing in mind, and if the mind has, indeed, its spiritual arms, hands, and fingers, and limbs, feet, and toes, and of which the natural ones are only correspondent manifestations, may not, then, the withdrawing of the spiritual arm from action in the mother's mind be the cause of preventing the natural one in the fœtus from being developed and produced? She deeply contemplates a girl without an arm, and hence sends no motion from her spiritual arm, and therefore produces no electric action through the corresponding nerves to organize the natural arm of the fœtus, and hence her child is born without an arm. The voluntary impression of her mind may be sufficiently great to overpower all involuntary action in that part. This would account for the crush of the lamb's head, before stated, and for all mishaps being transmitted by a deep impression from the mother's mind to the corresponding part of the fœtus. It would account for the color of Jacob's cattle, because all colors exist only in the rays of light which are but a result of electric action. It would account philosophically for the fact how the color of wine and the colors and shapes of berries are in like manner stamped upon the unborn being. It would account for the fact how even the mother's disposition may be phrenologically and hereditarily communicated to her offspring. By exercising too much her acquisitiveness or secretiveness—or by exciting too deeply her combativeness, destructiveness, or revengeful feelings, she may communicate these hereditarily to her child, and thus sow, in the embryo, the seeds of the future robber, liar, or even murderer. The lady, while enceinte, walks upon enchanted ground. She can not stir without touching some string that may vibrate either harmony or discord in her offspring's soul long after her head shall have been laid in the dust. Phrenology must take one step farther back. She must commence her instructions at the commencement of our embryo being. She must there take her stand at the fountain-head of existence, and thunder her lessons of eloquence as she moves down the stream of human life to the silent grave, nor cease her warning voice till the finger of death shall touch her lip.

The subject, Ladies, of Human Beauty is now fairly open before us, and its vast importance seems to awaken in your minds, as we proceed, an increasing interest. I am now ready to have the grand question introduced—How are our children to be born into existence with just such lineaments of form, or Human Beauty, as we may desire?

To answer this question understandingly, I will take into consideration the general directions to be pursued, and the means to be used in order to produce the noblest specimen of Human Beauty. I desire, at the very onset, to introduce the subject to you in its highest perfection, so far as I am able. To this end I must select a lady of brilliant talents, and who is highly educated and accomplished as an ornament of her sex, but whose features and form are but of ordinary mould. I merely desire one who is capable of producing the strongest possible mental impression. Let this lady select, before she conceives, a portrait, bust, miniature, or picture of some beautiful, talented, and distinguished individual, or the living person, she would desire her child to be like both in appearance and character. Let it be a picture that she greatly admires for its fine proportions and beauty of person. Let her keep her mind upon it until she entirely familiarizes herself with its features and form. Let her now conceive with this deep impression on her mind; and after this, let her still continue to gaze upon, and daily contemplate, the admirable grace of its form, and the charming expression of its countenance. Let her place it where it can be readily seen. Let her imbibe for this image a sentimental passion, indelibly impress it upon the heart, and interweave and blend it, as it were, with her being. Let her contemplate it by day with such intense interest and devotion as to transplant, if possible, its image to her midnight dreams. And let her constantly long and desire, and ardently hope and expect, that her child shall be like this in form and soul. These are to be her constant feelings and impressions till the day of delivery.

In addition to this, let the most admirable order, arrangement, and comfort pervade her house, and particularly her own apartment. Let its furniture be beautiful. Let it be adorned with pictures of the most pleasing and delightful landscapes embracing all the beauties and varieties of nature, and such life-like scenery as shall awaken and rouse the noblest powers of her ideality, sublimity, and imagination. Let her frequently go out to gaze upon, and contemplate nature as she is, whether on the earth beneath, or in the starry fields that mantle the bosom of night. By these means she will keep her mind in balance, and bring it into harmony with all that is grand and beautiful in the works of the Creator. And not only so, but let her soul be kept serene. Let her passions not be excited. Let her anger, jealousy, and vengeance remain in slumber, and no language be used to ruffle her tranquillity. I am speaking of a highly educated, accomplished, and talented woman. And, lastly, let her food be wholesome, plain, and prepared to her wishes, and adapted to her appetite. Let these directions be faithfully observed during her entire period of gestation, and her child will be moulded in the image of the picture, or living person she contemplated, and be born into existence a noble specimen of Human Beauty; and under proper phrenological culture it can be borne on in the path of improvement, and finally elevated to the highest physical beauty, and intellectual and moral perfection of our nature.

I have now considered what I call a perfect case, the noblest specimen of man. And in order to produce this happy result, we perceive that the mother must be highly educated, enlightened, and refined. It depends more upon her than the father. If the father should possess the talents of an angel, and the mother be deficient in intellect, her offspring, particularly the sons, would never rise above mediocrity. In such case the best intellect is in favor of the daughters. But reverse it, and let the father be deficient, and the mother highly talented, and she will produce intelligent children of both sexes, but this intelligence will be far more strongly developed in the sons than in the daughters. An instance can not be found where an imbecile mother ever produced a man of sterling talents, even though the father, as such, were most eminently distinguished. All talented and great men have had great mothers who, even if they were uneducated, still possessed the elements of original greatness.

Owing, therefore, to this great diversity of intellectual, moral, and physical beauty and deformity in females, it can not be expected, that the grand period will soon arrive when all these difficulties will be surmounted, and when our race shall attain that physical, mental, and moral beauty which our subject involves, foreshadows, and insures. Comparatively but few females are as yet qualified to successfully introduce their offspring into existence in Human Beauty, yet the most deformed and ignorant female can be instructed and directed how to improve her progeny. Her children again can be still farther improved and elevated, and so on to succeeding generations till the end, we contemplate, shall be obtained, and the highest hopes, and the brightest mid-day dream of the philanthropist, as to the perfection of humanity, shall be consummated.

My argument, thus far, relates to those of the female race who are not yet in the electro-psychological state, but who are still capable of gradually perfecting their progeny in proportion to the strength and power of their impressions, and thus moving them onward to the fair fields of Human Beauty. But in all these cases it can be effected by the wife only, independent of her husband. But there are many who are naturally in the psychological state, and millions more who, by a slight exertion, can be brought into it. Upon all such a mental and moral impression can be made to any extent we choose. In all these instances it would be in the power of the husband to select the portrait or picture in the likeness and beauty of which he would desire his child to be moulded. And by producing the impression psychologically upon the mind of his companion once or twice per day, the end would be obtained, and in all such cases the finest specimens of Human Beauty could now be produced. How important, then, that the science of Electrical Psychology should be thoroughly learned and understood by all, so that, through their assistance, as many as possible may be, by perseverance, brought into the state, and that the great work of producing these sublime impressions may now be understandingly commenced, and some rare specimens of Human Beauty, under the energy of this science, be presented to the world.

We see then, Ladies, the supreme importance of woman being highly educated and accomplished. Colleges should be dedicated to her, and all the great and useful sciences, that strengthen, expand, and elevate the mind, should be laid at her feet. Her mind should be early imbued with political science, and taught the value of liberty, and the deep-toned love of country. She should be taught the history of fallen empires, kingdoms, and republics, and be made acquainted with the hardships, toils, and sufferings of our revolutionary heroes. She should be taught the lofty dignity, honor, and heroism of George Washington, the cradled son of Columbia. She should be educated in every sense equal to the man. It has been generally supposed, in by-gone days, that if woman could barely read and write, it was abundant, as she had nothing to do but attend to her domestic concerns, and to take care of children. But the arrest of her progress in science has but proved to be an arrest of the intellectual, moral, and social advancement of the world. Her station, so far from being insignificant, is indeed a most responsible one. She holds in her silken grasp the destiny of empires, and the weal and woe of our race. She has not only a moulding power over her unborn offspring, but during the first ten years of its existence, as it is almost exclusively confined to her society, so from her it still continues to draw, in a great measure, its cast of character. Hence she should be educated and qualified to breathe to her child the purest thoughts and noblest principles, and to inspire its tender bosom with the deep-toned love of country. She should be qualified to impress upon it a high sense of honor and true greatness, and the most patriotic and exalted sentiments. And, in order to do this successfully, she should be well acquainted with phrenological science and human nature, so as to make her impressions understandingly and forcibly upon the proper organs of the brain. These organs would then be more and more harmoniously developed, and the child would continue to improve in beauty of person, and in intellectual and moral greatness, as he advanced to maturity.

In the light our subject now stands, how lamentable, and how awful is the consideration, that our children should be committed to the care of ignorant, degraded, and too often of wicked and unprincipled servants, to be almost exclusively reared by them! There the seeds of ignorance, if not of vice, are early sown. How elevated and responsible is the mother's station! How fatal to the character and welfare of her offspring are ignorance and vice! How dreadful, how alarming and fearful, to see her resign her fond charge, and commit its destiny, for weal or woe, to such unskilled hands! She had better resign her child to the silent grave, where, even though her lids are filled with tears, she can yet smile, that its pains are o'er, that its beating pulse is still, its spirit unstained, and its burning brow is cold! Yes, Ladies, the contemplation of this subject is so painful, that I choose to leave you to draw your own conclusions rather than to express my thoughts.

True, the pulpit insists on her social and religious rights, because this is popular. But by neglecting to plead in behalf of her *civil*, her POLITICAL, and INTELLECTUAL RIGHTS it has forgotten her elevated station and high destiny, fallen from heaven to earth, and, by its fall, crushed the dearest hopes of the philanthropist for the speedy, intellectual, and moral advancement of our race. It will not, and dare not speak in a bold, firm, and untrembling voice in defense of those rising sciences and improvements of the age, however useful, against which the current of popular opinion strongly sets. It has ceased to breathe the pure, healthful, and invigorating breezes of Paradise, that inspire an independent and godlike heroism. Woman is thus, in a voice of pretended mercy, oppressed, and it dare not even rebuke oppression and crime, when clothed in gold and sustained by popular impulse.

The pulpit is the great engine of moral power and moral reform. But by neglecting the science of Human Beauty, and the general and extensive education of woman, its energies are in a great degree paralyzed. But it is destined, by the decree of the Ruling Heavens, to be aroused from its dreadful slumberings upon the monster POPULARITY, whose breath is consuming it, and to thunder its energizing and regenerating powers for the accomplishment of this great end which involves the moral elevation and the intellectual grandeur of man. The science of GENETOLOGY, embracing the doctrine of psychological impressions, in connection with the gospel of Jesus Christ, is destined to renovate the world and usher in the millennial morn. Extensive combinations are formed, and the most untiring exertions are constantly made to improve, not only the animal, but even the vegetable race. Fruits and grains, in a few years, have been brought to great perfection, by man simply co-operating with nature so as to enable her to make the most favorable impressions to produce what is beautiful in her vegetable department. So also in the animal kingdom. Horses, sheep, and oxen, and even the race of swine, are annually improving in form and beauty, and premiums are offered for the finest specimens, both as to symmetry and size. But not a single thought is bestowed as to improving and beautifying the godlike lineaments of the human form. To improve these through the educating of woman, and enlightening her how to make a psychological impression upon her embryo-child, is but to improve the morals of our race. The theme is a great one, and it will require future generations to move it on, and to develop and present it perfect to the world. It will be the scroll of Human Beauty enrolled. This is indeed a sublime hope.

"Eternal hope! when yonder spheres sublime
Peal'd their first notes to sound the march of time,
Thy joyous birth began; but not to fade
When all the sister planets have decayed.
When wrapt in fire, the realms of ether glow,
And heaven's last thunder shakes the earth below,
Thou, undismayed, shalt o'er the ruin smile,
And light thy torch at nature's funeral pile."

SIX LECTURES

ON THE

PHILOSOPHY OF MESMERISM.

DELIVERED IN THE

Marlboro' Chapel, Boston.

BY JOHN BOVEE DODS.

REPORTED BY A HEARER

TWELFTH THOUSAND.

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ANIMAL MAGNETISM.

LECTURE I.

Ladies and Gentlemen: It is with much pleasure that I present myself before you this evening, to lecture upon the science of Animal Magnetism. I do this by special invitation from several distinguished members of both branches of our legislature, now in session in this city; and this thronged congregation of more than two thousand hearers speak the interest which is awakened in the bosoms of our citizens in relation to this subject. This dense and anxious crowd too plainly manifest the high expectations which are entertained of the feeble abilities of the speaker to do it justice—expectations which I am fully sensible I shall be unable to answer. Leaning, however, upon the solid grandeur of truth, and believing THAT to be stirring eloquence and living power, I have, therefore, even as things now are, with all your roused expectations crowding upon me, but little to hazard, for I am fully sensible that I am standing before a learned and an intelligent congregation. And when I inform you that I have never written any thing upon this subject, and am, therefore, obliged to speak from the fortuitous suggestions of the moment, I am conscious that you will do me justice, by making every reasonable allowance.

It is not my profession to lecture upon this subject. I have other means for my subsistence, and for that of those who depend upon me. Circumstances have called me into the field. Many, very many ignorant individuals, who know nothing of the human system, nor of the common principles of any science, have gone into the field as lecturers on Animal Magnetism, and by making it a mere puppet-show, have brought it into degradation in the public mind. Such persons are doing the cause, which is one of benevolence and mercy, an irreparable injury. They had better qualify themselves for the work, or else retire from the field. In this state of things, I was urged, by several scientific gentlemen, to step forward in defence of the cause of righteousness and truth, and to lend my aid in raising it from the dust, in wiping off the sneers of men, and in placing it on a foundation where it should command not only the attention, but the respect and admiration which are justly due to it from men of science and talents In this city, I find but one noble spirit laboring and toiling, who is well qualified for the work, and who is deserving a better patronage than he receives.* As these are the circumstances under which I have entered the field, so, of course, I visit those places only where I am invited to lecture upon this science.

I have had the subject of Mesmerism under consideration for about seven years, reading all that came in my way for and against it. Five of these years I remained a stubborn, a most confirmed sceptic, and refused even to attend a lecture, or to witness an experiment, until I was persuaded by a particular friend of mine to accompany him, and see and hear for myself. I am, therefore, prepared to make all due allowance for honest sceptics; and, in their opposition to me during this course of lectures, I shall maintain an entire empire over my feelings; and being fully sensible of their condition, I well know how to sympathize with them. But there is yet another class of sceptics, who have witnessed experiments which they cannot resist, and still cry, "HUMBUG AND COLLUSION!" Of these, there are two kinds. First, those who never investigate anything for themselves, and who do not know the definitions of the words, "humbug and collusion;" but who, nevertheless, use them very freely, because they have heard their minister, their doctor, or, perchance, their schoolmaster, use them. They do it by imitation, on the same principle that the parrot imitates the sound of the human voice, and they do it just about as understandingly. Second, those who are talented, and desire to keep on the wings of the popular breeze, and catch the breath of fame. These may be known by the ridicule, wit, and sarcasm they employ, through the press and otherwise. But, "humbug and collusion" have become stereotyped words, and their use costs but little labor; and they answer most admirably to supply the place of sound argument and common sense in the most of minds. If my hearers will please turn their attention to all the talented writers, who have, in various ages, vehemently opposed those now well-established sciences which, in their infancy, appeared incredible, and who assailed them with the bitterest invective and sarcasm, hey will learn that they were men who were always studying what was popular, and who had a large share of self-esteem, and of the love of approbation. This test will hold good from the opposers of the earth's revolution on its axis, discovered by Galileo; from the scoffers at the science of the circulation of the human blood, discovered by Harvey, step by step, down to the scoffers at Fulton's application of steam-power,—yes, even down to the opposers of, and scoffers at, the brilliant science of Phrenology, which is now spreading with a power that can never be successfully resisted, a zeal that cannot be quenched, and a living energy that can never die. True, a candid man, as well as any other, may doubt a new science; yet, however strange or incomprehensible it may appear, he will not denounce till he has given the subject a candid investigation. I am speaking of those only who denounce without investigation, and who can assign no other reason for so doing, but their own willing ignorance, or because the popular voice is against it.

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* Dr Gilbert.

I am, however, proud in the reflection that the science of Mesmerism is embraced by men of the first talents and science in both continents, and whose names will live in the republic of letters, and shine with lustre long after those of fawning sycophants shall have been lost in unremembered nothingness. It is embraced here among us by a Pierpont, the Fowlers, a Gilbert, a Neal, and a Wayland. It is embraced by men who have forgotten more than those who cry "humbug and collusion" ever knew.

I have been in the field as an occasional lecturer ever since October, 1841, and have uniformly advocated the same principles which I am now about to advance and sustain in the course of lectures I am pledged to deliver in this city. This fact, many now present well know who have heard me in other sections, or who have seen the substance of what I have now to offer on Mesmerism, reported by the editor of the Yarmouth-port Register, in March, 1842. I shall here contend for the same principles, and endeavor to sustain them by fair experiments, in electricity, galvanism, and common magnetism.

There is one apology, however, to be offered in favor of honest sceptics. It is this: Those who have lectured upon Mesmerism have not pretended to give any cause for the wonderful phenomena produced—have held them in mystery, and perhaps pronounced them inscrutable to the human intellect. Hence, it is not strange that thousands, under such an impression, should refuse to investigate a subject which its advocates held in mystery. That there are mysteries in Mesmerism I readily admit; but that there are more than in any other science, I deny. We may, for instance, tell the chemical properties of earth, water, and air, and the degree of warmth necessary to produce vegetation. But still no one can solve the mystery how an acorn becomes an oak, or a seed becomes a plant. There is no science in the universe, but what has some incomprehensibilities resting upon its face; but this circumstance is considered no objection to the truth of any science. Hence there is no reason why Mesmerism should be rejected on this ground. Yet thousands do reject it, because they contend that it is incomprehensibly strange! They know nothing but what is strange, and yet what is strange they cannot believe! All the operations of nature going on around us are strange, and the only reason we have ceased to wonder is, because they are common. All such objections are therefore futile.

Before I proceed any further, I would remark that I consider "ANIMAL MAGNETISM" a very inappropriate name. It should be called SPIRITUALISM, or MENTAL ELECTRICITY, because it is the direct impulse of mind upon the minds and bodies of others. As it is the science of MIND AND ITS POWERS, so it is the highest and most sublime science in the whole realms of nature, and as far transcends all others as godlike mind transcends matter.

Having made these introductory remarks, I now proceed more directly to the consideration of the subject before me. In presenting before you "the WHY and the WHEREFORE" of these interesting phenomena, and, in order to make them plain to the humblest capacity, it will be necessary to associate the subject with other principles in philosophy which are well understood by all, and thus rise from the consideration of the more gross and dense particles of matter, step by step, up to those which are the most rarified and subtil of which we can form any conception. In doing this, I shall not take into consideration every possible grade or species of matter, but those substances only which belong to the great classifications of nature's empire, and which are the most obvious to every observer.

In the first place, then, I contend that there is but one common LAW pervading the whole universe of God, which is the law of EQUILIBRIUM. In perfect accordance with this law there is kept up a constant ACTION and REACTION throughout every department of nature. It is true there has been much written, and still more said, about the multiplicity and variety of the laws of ture But this is, at least to me, wholly unintelligible. While, however, I contend for but one COMMON LAW, it is still conceded that this law is so varied as to be perfectly adapted to all the variety of substances in being. On this principle the earth is certainly not eternal, for were it so, the hills and mountains would long ago have been washed to a level by the storms of heaven; yes, it would have been done by the gentle descending dews. Indeed, I hazard nothing in saying, that even the mountains of solid granite would have been crumbled into atoms ages ago, by the very operation of the particles of air—"the fingers of Time;" because every thing in nature is tending to an equilibrium.

Having begun at the grossest particles of matter, let us now rise gradually in our contemplations, step by step, up to those that are the most rarified and subtil of which we can form any conception. WATER is a body lighter than earth. Let a canal be dug of one hundred feet in depth, one hundred in width, and a thousand feet in length. Let a strong lock be constructed across its centre, and one half filled with water. Let the gate be hoisted, and the water in the one division will fall, and in the other rise, until an equilibrium of height is attained. Nature, having gained her end, is then at rest. And the action of this element will be great in proportion as it was thrown out of balance. The rush will be at first tremendous, but continue gradually to lessen until it finds its perfect slumber in equal height

The same is true in relation to our atmosphere, a substance lighter than water. The air in this room is now rarified by heat, and is thus thrown out of balance with the circumambient air which is more cold and dense Hence, through every key-hole and crevice there is a rush of this element into the room, which will continue until the equilibrium of density is attained. Then, and not before, nature, having gained her end, will be at rest. The air in one section of the globe is more rarified by heat than in another; and hence the gentle zephyrs of heaven are continually fanning the human brow with a touch of delight, and carrying health to human habitations. If this element be thrown still farther out of balance, we witness the stirring gale; and if carried, in this respect, to its extreme, we witness the sweeping hurricane, or the roaring tornado, which prostrates human habitations in its mighty course, and bows the mountain forest to the earth.

The same is true in relation to electricity, a substance more rarified and light than air. If two clouds are equally charged with this subtil fluid, they may pass and repass each other, or mingle into one, yet not a flash of lightning will be seen. But if they are unequally charged, or what is called in electrical science, "positively and negatively charged," then the heavens will stream with forked lightning, till both clouds are equally charged. By long drought and heat, electricity becomes very unequally diffused throughout the atmosphere. One portion of air contains a much greater quantity than another, and when thus thrown out of balance to a certain extreme, nature can hold out no longer. A reaction must take place. Convolving clouds roll the heavens in darkness—the lightnings flash, the thunders roll, and the war of elements continues until the electric fluid is equally diffused throughout the atmosphere, and also equalized with the earth.

Nature, having thus gained her end in he equilibrium produced, is at rest—all is calm.

If we pass on from inert matter to animated nature, we shall find that the same law there also holds its empire. If, for instance, a healthy child, three or four years of age, be permitted to sleep every night for a year or two between two very old, decrepit grandparents, it will pine away, and if not removed, perchance it may die. There is, perhaps, not one under the sound of my voice, but what has heard the remark, that "it is very unhealthy for young children to sleep with very old, infirm people." It is even so, and parents should beware. The child is full of animal life, and its nervous system is charged with the vital fluid, secreted by the brain. This gives that suppleness to the limbs, and that buoyancy to the heart which we witness in the young. The grandparents lack the proper quantity of this nervo-vital fluid, which occasions that rigidity of the limbs we witness in the aged. The same common law of equilibrium that pervades the universe, is here also in operation. The nervo-vital fluid passes from this child to the two aged persons in conjunction. The child loses, and they continue to revive, and as this little one can never bring those infirm persons up to an equilibrium with itself, so it must go down to them. Nature will have her equilibrium, if she has it in death.

Once more: there is in the nervous system no blood. By the NERVOUS SYSTEM I mean the brain and all its ramifications. The blood belongs exclusively to the circulating system, which embraces the veins and arteries. I grant that the blood-vessels pass round the convolutions of the brain, but in the nerve itself there is no blood, and the whole mass of brain is but a congeries of nerves. These are charged with a nervo-vital fluid which is manufactured from electricity. Hence, the circulating system containing the blood, and the nervous system containing the magnetic fluid, are not to be blended, but distinctly considered. Now, as a human being may lack the proper quantity of blood in his circulating system, so he may lack the proper quantum of the nervo-vital fluid in his nervous system. This is certainly rational. And, moreover, it may be easily known when such is the case. When we see persons who, on hearing suddenly some good or bad news, are thrown into great excitement, tremor, and agitation, we may be certain that their nervous systems lack the due measure of the nervo-vital fluid. Now let a person whose brain is fully charged, come in contact with one whose brain is greatly wanting in its due measure of this fluid, and let the person possessing the full brain gently and unchangeably hold his mind upon the other, and by the action of the WILL, the fluid will pass from the full brain to the other, until the equilibrium between the fluids in the two brains is attained. The sudden change in the receiving brain produces a coolness and a singular state of insensibility. This is MAGNETISM; and it is in perfect accordance with all the principles of philosophy in the known realms of nature. If any one denies the operation of the law of equilibrium in this case, then he here makes a chasm, amidst the immensity of God's works, which he can nowhere else discover I have clearly shown him that, from the grossest matter in the universe, step by step, through every grade, up to electricity, the same law holds its empire, and matter is continually equalizing itself with matter.

On this principle, it will be readily perceived that, if a person has a great deficiency of the nervo-vital fluid, he can be mesmerized the first sitting, and probably in an hour's time, or a much less period. These we call easy subjects. But if the deficiency be less, it will take a longer period in proportion, and if the brain have nearly its proper quantity of fluid, then the effect produced, at the first sitting, will be small, yet still it will be visible.

From the premises laid down, and in accordance with the law of equilibrium, it will probably be said, that only few persons can be mesmerized. This, however, is not correct. I contend that every person in existence CAN be, and indeed OUGHT to be thrown into the mesmeric state. This, I am well aware, is contrary to the opinion of the advocates of this science. The most liberal calculation I have as yet heard, is that about one in nine of the human family can be mesmerized. But every one can be, and that, too, in perfect accordance with the principles laid down. Let two persons of equal brains, both in size and fluid, sit down. Let one of these individuals remain perfectly passive, and let the other exercise his mental and physical energies according to the true principles of mesmerizing, and he will displace some of the nervo-vital fluid from the passive brain and deposit his own in its stead. The next day let them sit another hour, and so on, day after day, until the acting brain shall have displaced the major part of the nervo-vital fluid from the passive brain and filled up that space with his own nervous force, and the person will yield to the magnetic power, and sweetly slumber in its inexpressible quietude.

LECTURE II

Ladies and Gentlemen: On the last evening, I had the pleasure to deliver before you my introductory lecture on the science of Spiritualism, and to explain "the why and the wherefore" of the effect produced I clearly showed that Mesmerism was in perfect accordance with the universal law of nature, which I call the law of Equilibrium; and, as I, in concluding my lecture, contended that every person in the world could be mesmerized, some, as I suspected would be the case, have to-day argued that, according to the principle laid down by the speaker, two brains of equal power can no more mesmerize each other, than one of a less power can mesmerize a greater; and hence, that the arguments of the lecturer are contradictory and irreconcilable. But this objection is by no means valid. It is readily conceded that two brains equally full and healthy cannot affect each other, admitting both persons to be equal in muscular energy, and to make at the same time the same mental and physical effort. But, if one person sit down and passively resign himself, and another even of less power and less nervo-vital fluid exert all his energies, then the law of equilibrium requires that there shall be an effect produced in the passive object equal to all the power exerted by the active agent. Hence, a weaker person can mesmerize one of superior power, and the same persons may alternately throw each other into the mesmeric state. I have known the instance where a small girl, only nine years of age, mesmerized a young man twenty years old, and of uncommon strength. Though it is a well known law, that two bodies of water will seek a level when a communication is made between them, yet it is equally true that, by a pump, water may be thrown from a lower to a higher cistern; and who will deny that it is in perfect accordance with the law of equilibrium? Surely, no one. It is by physical energy that the air is removed from the pump, and the circumambient air pressing upon the water in the cistern, causes it to rise till an equilibrium of height is attained—exactly equal to all the powers employed. But so far as the mesmeric state is concerned, it will be remembered, that man, in acting on his fellow-man, exerts not only a PHYSICAL, but a MENTAL, and MORAL power. These must all be taken into consideration, and duly weighed, in order to form a correct idea of the law of equilibrium in the employment of the magnetic forces. If this common law in nature extended no farther than merely to bring substances that are out of balance down to a common level, then all action in the various elements would soon cease.

It will be remembered that no one kindred element ever disturbs itself, or ever throws itself out of balance. It requires another element to do this. The water would always keep on a perfect level with itself, throughout the globe, if air and heat never disturbed it. By heat it is rarified into vapors, carried over the globe in aerial conductors, condensed by cold into drops, and rained upon the mountains and more elevated portions of the globe, and then again seeks its level with the parent ocean. So there is a power that rarifies the air and the denser portions rush to its aid, and the winds are in action to keep up a perfect balance in its own empire, while air, abstractly, could never disturb itself. Hence it is even the law of equilibrium by which one portion of water is thrown out of balance with itself; and the same is also true in relation to the atmosphere. If heat, which is but the action of electricity, rarifies the water so as to cause it in subtility to approximate itself, then surely it is according to the law of equilibrium that water is thrown out of balance with itself by forcing it into a partial equilibrium with some more rarified substance. Carrying out this principle, and applying it to Mesmerism, it will be readily understood not only how two persons of equal power may mesmerize each other, but even how one of less physical power may mesmerize a greater, and yet the whole be effected in perfect accordance with the law of equilibrium.

Having made these remarks, which the occasion seems to demand, I will now proceed to a direct consideration of the nervo-vital fluid in the human brain.

It is admitted, that the air we breathe is composed of two substances, namely, OXYGEN and NITROGEN. Their relative qualities are about one-fifth oxygen and four-fifths nitrogen. But these are not all. It is evident, that hydrogen and electricity are also component parts of air. Oxygen and electricity are the principles of flame and of animal life. while nitrogen extinguishes both. There is not a single square inch of air but what contains more or less electricity. The air in its compound state is drawn into the lungs. The oxygen and electricity are communicated to the blood, which is charged with iron, while the nitrogen is disengaged and expired. This iron, which gives color to the blood is instantly rendered magnetic under the influence of electricity, analogous to the needles in the galvanic battery which become magnets merely by induction. The blood itself is, at the same time, oxydized by the oxygen of the air, and instantly becomes cherry red. This oxygen generates an acidity in the blood, in some degree answering to the solution of the sulphate of copper in the galvanic battery The blood, thus magnetically prepared at the lungs, is thrown upon the heart, and forced into the arteries. Hence, arterial blood is red. It is propelled to the extremities, driven into every possible ramification, and is collected and carried back in the veins, through the other ventricle of the heart, to the lungs, for a fresh supply of the electro-magnetic power. Hence, venous blood is dark, and is unfit to be thrown into the arterial system a second time till it has again come in contact with the oxygen and electricity of the air. The blood, thus discharged, is propelled through its living channels, and this friction causes the electro-magnetic power to escape from the circulating system into the nervous system, for which it has a strong affinity, and, being secreted by the brain, it becomes the nervo-vital fluid, or animal galvanism. It is important here to remark, that the blood, in its friction through the arteries, has given off its electro-magnetic power into the nervous system. The blood, thus freed, assumes a dark appearance in the veins, and becomes entirely NEGATIVE. The lungs, being charged with a fresh supply of electricity, become POSITIVE. Hence the blood is drawn from the veins to the lungs on the same principle that the negative and the positive in electricity rush together.

From the above observations, it will be perceived that every muscle of the human body, every organ and gland, is polar, and by the negative and positive principles, as above noticed, animal life is sustained and perpetuated through the action of the lungs and blood.

We thus perceive that the nervo-vital fluid is manufactured out of electricity, taken into the lungs at every inspiration. It completely charges the whole brain, when that organ is in a healthy state. The nerves composing the brain, are of three kinds, namely: the nerves of sensation, the nerves of VOLUNTARY motion, and the nerves of INVOLUNTARY motion. I make these three divisions, so that I may be the more readily understood when speaking of nervous action. I desire you to bear in mind that these three classes of nerves are all charged with the nervo-vital fluid, which is exactly prepared to come in contact with mind.

We put forth a WILL. That WILL stirs the nervo-vital fluid in the voluntary nerves. This fluid causes the voluntary nerves to vibrate. The galvanic vibration of these nerves contracts the muscles. The muscles, contracting, raise the arm, and that arm raises foreign matter. So we perceive that it is through this concatenation, or chain, that the mind comes in contact with the grossest matter in the universe.

It is evident that there is no direct contact between mind and gross matter. There is no direct contact between the length of a thought and the breadth of that door. Nor is there any more direct contact between my mind and hand, than there is between my mind and the stage upon which I stand. Thought cannot touch my hand; yet it must be true that mind can come in contact with matter; otherwise, I could not raise my hand at all by the energies of my will. Hence, it must be true, that the highest and most subtil of inert matter in the universe, being the next step to spirit, can come in contact with the mind. And electricity, changed into nervo-vital fluid, (which is living galvanism,) is certainly the highest and most etherial inert substance of which we can form any conception. Hence, as before remarked, it must be true, that we put forth a will. By the energies of that will this galvanic substance, or nervous fluid, is proudly stirred; that stirring vibrates the nerves; this vibrates and contracts the muscles; the muscles raise the arm, and that arm moves dead matter.

Notwithstanding the plausibility of this argument, it will yet be said that, as physiologists contend that no one can explain through what medium the mind comes in contact with matter, nor even how a muscle is made to contract, and raise the arm, and as the lecturer has undertaken to explain it, we have a right to demand POSITIVE proof. This demand being rational, I will endeavor to meet it. I am, then, to prove that the nervo-vital fluid, (which is perfect galvanism,) is indeed the agent by which we contract the muscles and raise the arm. That being done, my point is gained, and the medium through which mind comes in contact with matter is established.

I would first remark, that it is common when criminals are executed, that their bodies are delivered over to medical men for dissection. Now take a human body, and let it be conveyed from the gallows to the charnel-house, and laid upon the dissecting-table. Let a continuous shock from a strong galvanic battery be given, and the muscles of the dead man will contract, and exhibit many frightful contortions. Many interesting experiments of this character have been published The dead man has been known to spring upon his knees, jolt them upon the floor, make violent gesticulations with his hands, move his head, roll his eyes, and chatter his teeth. The student, unused to such ghastly exhibitions, has left the room, or fainted away; and even the experienced physician has started back with horror at the frightful contortions which he himself had made. Now, what was it that contracted the muscles of this dead man? There is but one answer to the question. It was galvanism. And what is galvanism, but electricity in a changed form; so that, instead of giving the system a sudden shock, like electricity, it merely produces a singular vibrating sensation upon the nerves, which causes the muscles to contract? It is nothing else. Electricity, galvanism, magnetism, or attraction and repulsion, are but different dispositions of the same common fluid. Now, as galvanism contracts the muscles of a dead man, and is the only power known that, when artificially applied, can contract the muscles of the living, so it must be the agent employed by the will to contract the muscles, and enable us to perform all the voluntary motions of life. Whatever may be the opinions of others, I consider this argument irresistible, and shall hold it as such, until it be fairly refuted.

It must now appear plain to every candid mind, that by the action of the will, and the exercise of all the mental powers, the nervo-vital fluid, this living galvanism, is continually thrown off from the voluntary nerves, and through the respiratory organs is again supplied. There is still, however, a greater waste. The involuntary nerves throw off another large portion through the action of the heart and lungs, and the digestive apparatus. And the nerves of sensation, also, do their part in throwing off this fluid. Let me here particularize. The nerves of sensation are those by which feeling is conveyed to the mind. The voluntary nerves are those through which the mind gives motion to those parts of the body that are under the control of the will. The involuntary nerves are those that give motion to such parts of our system as are not under the control of the will. None but the involuntary nerves pass to the heart, stomach, and liver. So the heart will throb, the stomach digest its food, and the liver secrete its gall, when we are awake or asleep, whether we will it or not. But to the lungs go both the voluntary and involuntary nerves. The involuntary ones are, however, the most numerous, so that though a man may hold his breath and keep the lungs in suspension till he faints, yet the involuntary nerves will get the mastery, and restore him. Through these three sets of nerves the galvanic fluid is continually wasting and passing from the whole system.

That I am correct, as to the nature of this nervous fluid, is certain. Take an animal, and tie off the involuntary nerves that lead to the stomach, and digestion will instantly cease. Then pour a moderate current of galvanism from the battery into the stomach, and digestion will immediately commence. Hence, I have clearly proved that the nervo-vital fluid, secreted by the brain, is of a galvanic nature, and is manufactured from electricity which we breathe into the lungs every inspiration we take. And I have, moreover, proved that this electro-magnetic power is the only matter that can come in contact with mind, and is the only agent by which the will contracts the muscles. Hence, the conclusion is absolutely unavoidable, that, by the concentration of the mind upon an individual, and by the action of the will, this fluid can be thrown upon another person till his nervous system is fully charged. This is Mesmerism.

Having these important facts before us, we perceive that the subject is one of momentous interest. The nervous system, embracing the brain and all its ramifications, when once diseased, seems to baffle all medical aid and skill. Hence, those upon whom fits of derangement are permanently settled, are abandoned as hopeless; and of both of these states, we are all more or less in danger. Those persons, particularly, who, on hearing the least good or bad news, are thrown into tremor and agitation, are in danger. Their brains lack the proper quantity of the nervo-vital fluid. It will be remembered that in the nerves of the brain there is no blood. The blood is exclusively confined to the veins and arteries, while the nerves are charged with this nervo-vital fluid—a galvanic substance. Now if the veins and arteries are filled with blood, and if the nerves are fully charged with the galvanic fluid; in one word, if the circulating system and the nervous system are in perfect balance, health and firmness are the result. But if the circulating system lack its proper quantity of blood, then languor and debility of body are the result. But if, on the other hand, the nervous system lack its proper quantity of galvanic fluid, then nervous excitability is the result, and the person is in danger of fits, derangement, and all the nervous diseases that attend the human race. This is evident from the following facts: Take a person who has a sufficiency of blood in the circulating system, but who, at the same time, has not enough of the galvanic fluid in his nervous system. By some circumstance the blood is suddenly thrown to his head, and the veins and arteries which pass round among the convolutions of the brain are swelled with this pressure. The nerves composing the brain not being sufficiently filled and braced with the galvanic fluid, spasmodically collapse, and a fit is the result. How often do persons, who suppose they are well, suddenly drop down dead in the streets! How often has a father or mother retired to rest, and apparently in health, yet in the morning the children found one or the other a corpse! Here, through eating too much, or some other cause, the blood was suddenly propelled to the brain, and the nerves, not being sufficiently braced with the galvanic fluid, collapsed, and by apoplexy, instant death ensued. Even the bosom companion, slumbering upon the same pillow, never felt a motion.

Now if these persons had been mesmerized, no such calamity would have ensued. Their nervous system, by which I mean the whole brain and all its ramifications, would have been charged from a full and healthy brain, and having been thus charged, it would have stood the war of internal elements, and outrode the rushing storm.

In the light our subject now stands, we perceive how vastly important it is that every person while at ease, or even in health, should be operated upon until the brain is magnetically subdued. As stated in my first lecture, one person can be mesmerized in an hour or less another in two hours, and so on up to thirty hours. Let a healthy friend of yours sit down, one hour each day, until he subdues your brain. No person should mesmerize more than one hour in twenty-four The exertion is so great, he will injure himself if he do. But here is the glory of this science. Though you may labor an hour each day for twenty or thirty days in succession, yet what you gain, you hold, until the work is accomplished. And not only so, but after the brain is once magnetically subdued, you can then throw the person into the state in five minutes. Yes, a child ten years old can then mesmerize a giant father. Your brain being magnetically subdued, it is worth hundreds of dollars to you. You are then ready for the day of distress Come what may—toothache, headache, tic doloreux, neuralgia, or any pain of which you can conceive; let some one mesmerize you and then wake you up, and the pain is gone. The whole process need not occupy more than ten minutes. Should you fall and break your arm, then let some person mesmerize the arm only, which can be done in one minute. You are free from pain, and though in your wakeful state, yet you can look quietly on, and see the bones put to their places. Your arm can then be kept in the mesmeric state, and thoroughly and rapidly healed without having ever experienced one single throb of pain. Or by simply mesmerizing your arm or leg, you can sit in the wakeful state and see them amputated, and feel no pain. But if you neglect to have your brain magnetically subdued, then when the day of distress comes upon you, as it might require several hours to put you into this state, it will then be too late to avail yourself of the blessings this science is calculated to bestow.

It is not only a preventative of fits, insanity, and of the most frightful nervous diseases, and a safeguard against pain, but it will cure fits, if no congestion of the brain has taken place. It never fails to remove the ague and fever, however long it may have been upon the individual, and will prevent any fevers prevalent in northern climates, if the individual be mesmerized as soon as taken.

Here, then, are opening before us new fields of action, where those who have hearts of benevolence may freely roam at large, and find ample scope for the full gratification of all their sympathetic and Christian feelings and those who scoff and sneer at this science, do scoff and sneer at human wo and human pain, and know not what they do.

LECTURE III

Ladies and Gentlemen: The two lectures I have had the pleasure to deliver, and the successful experiments I have, during the last two evenings, performed in your presence, have awakened opposition, and the excitement has truly become tremendous. Hundreds cannot gain admittance into this capacious chapel, and the breathless anxiety and stillness of this crowded congregation, show the deep and stirring interest which you feel in the science of Mesmerism, which is the science of mind and its godlike powers. For many ages men have turned their attention to matter, and confined all their investigations to the realms of material philosophy. It is true, that here and there a noble spirit has turned his attention to scan the nature and powers of the human mind itself. But she seemed to close her laboratory against their entrance, and forbid them to lay their hands upon her sacred shrine. In this condition, there was no alternative but to judge of mind itself from its vast and complicated operations, both mental and moral. But that the mind itself could directly produce a physical rsult by its own living energies, seems never to have entered their hearts. But new fields of thought are opened to the human soul, and the mysterious and wonderful powers of the living mind are now seen and felt. Circumstances require me to say that I regard not the opposition or the scepticism of men. I challenge investigation both as to the experiments I perform, or the arguments I offer. stand mailed with immutable truth ; and hence, on this subject, am invulnerable to every attack. Truth is immutable, cannot bend to circumstances, and must stand independent of the belief or unbelief of men. It must soar on towering wing far above the reach of scorn, and sooner or later triumph over all opposition.

I now come to speak of mind and its powers. I have clearly shown that the WILL raises the arm through the agency of electricity. Perhaps I should not call it electricity, but NERVO-VITAL FLUID, or GALVANIC FLUID, manufactured from electricity taken in at the lungs The WILL is not an attribute of the mind, but the result of all the attributes brought into council and action. It is the executive of the mind. The question now comes up in proper order before us : Is there any power in mind to produce a result by simply WILLING it ? I contend that there is, while the opposers of Mesmerism contend that there is not. Mesmerism, then, must stand or fall on the existence or non-existence of such a power And first, let me appeal to you as Christians. If you deny that mind, or spirit, has any power to produce a physical result, then how does the Creator govern the universe ? How can his Spirit come in contact with matter so as to produce any physical results ? The creation and government of the world are represented in scripture as the result of the divine will. " He doeth according to his will in the army of heaven, and among the inhabitants of earth." The creation of the world and all its appendages is represented as the effect of his will. " He said, let there be light, and there was light." " He spake, and it was done ; He commanded and it stood fast." If, then, the infinite Spirit, by holding his will unchangeably upon all the multifarious objects of creation, moves unnumbered worlds, and governs the universe, then there is also an energy and power in the human spirit proportionate to its greatness. If you grant that the infinite Spirit, by putting forth an infinite will, can produce infinite results, then surely a feeble finite spirit, by putting forth a feeble finite will, can produce a feeble finite result. I only ask you, as Christian philosophers, the admission that the same CAUSE shall produce the same EFFECT.

If, however, you deny the correctness of this conclusion, then I have only to say, that you furnish the atheist with a weapon by which he is sure to defeat you. Argue as long as you please, and even drive the honest atheist from any other ground, he will at last say: "Well, admit there is a God, yet he can do nothing." Your Bible says, "God is a spirit." Hence, he has no hands, feet, nor physical body, as we have. He may therefore, WILL and WILL to all eternity; yet he can do nothing, because spirit, by its mere mental action, cannot come in contact with, nor in the least affect matter We know this, says the atheist, from observation and experience. "And what can we reason but from what we know?" A human being, for instance, may sit down and exercise all his mental energies. He may WILL and WILL to endless ages, yet he can do nothing—cannot produce the least physical result, unless he uses his hands or comes in bodily contact. I now ask those Christians who deny that the mind has such power as we are contending for, how can they answer this argument of the atheist? I contend that they are not able to meet it. There is no human ingenuity beneath these heavens that the Christian opposers of the mesmeric power can summon to their aid adequate to the task.

Indeed, it implies a contradiction in terms, and involves them in the following compound dilemma: If the infinite Spirit, by the energies of his will, can produce infinite results, then a finite spirit, by its will, can produce a finite result. But a finite spirit, by its will, cannot produce any result, so an infinite spirit, by its will, cannot produce any result! Of this dilemma, they may take either horn. Now for the consistency of these sapient opposers. They admit that the infinite Spirit, by its will, governs the universe, and produces infinite effects, and yet deny that a finite spirit, by its will, can produce the least physical effect; which is most philosophically absurd! But, if a finite spirit, by its living energies, can produce a finite result, then there is a God, and the heavens do rule. I am willing to meet any intelligent clergyman in controversy who denies the truth of Mesmerism; and before this enlightened congregation, who shall be our jurors, I will either make him acknowledge the mesmeric power, or drive him to atheism. I will leave him no other alternative.

We have, thus far, confined our inquiries to the fact, whether there was ANY power at all in mind to produce results independent of bodily contact. I now take a still higher stand, and deny, in total, that there is any POWER or MOTION whatever, in the whole immeasurable universe, except in mind. There can be no power without motion, nor can there be motion except it originate in mind. I care not through how many concatenations of cause and effect you may trace motion, it is after all but secondary, and must be traced back to mind as its starting point. For instance: suppose a ball should lie at rest upon this floor. It would never stir unless motion were communicated to it by some extraneous power.

If another ball entered that door, and came in contact with the ball at rest, it would communicate motion to it by impulse, losing just as much as it communicated. But here is no beginning of motion, and every one would look around for the cause. If, while gazing, you should see another ball enter the door, struck by a bat, you might not yet be satisfied whether that bat was held in a man's hand, or whether it was fastened in some machinery prepared, and put in motion by human ingenuity. But you see a third ball enter the door, and not only discover the bat but the hand that grasps it. You are now satisfied. You know that the hand is connected with a body, and that body with a brain and mind. Now, in these three instances, there is no beginning of motion. The man's hand, the bat, and first ball, are but the three instruments through which motion was communicated to the ball at rest, and the man's mind was sole mover.

As the subject of Mesmerism is directly connected with the powers of mind, and as this is the pivot on which the question between its advocates and opposers must eventually turn, you will permit me to take a wider range in this extensive field. There must be some medium through which the eternal mind comes in contact with gross matter, moves unnumbered worlds according to nature's law, and sustains and governs the unbounded universe. That medium must be the finest, the most rarified, and subtil of inert matter in being. It must be the last link in the material chain of inert substances that fastens on the mind. This is electricity. Hence, it is through electricity that the Great Spirit comes in contact with his universe. This is evident, because it is electricity as it exists in the human sysion, through which our spirits come in contact with matter. We are but an epitome of God's universe, and in us is contained every variety of matter and substance in being. "The proper study of mankind is man;" and in this study, the most unbounded fields are opened to the range of human thought.

It may now be asked, if electricity is that substance through which the Creator comes in contact with matter, how then could he act when that splendid substance had no existence? or, in other words, how could he create "all things out of nothing?" I deny the assertion, that God created all things out of nothing, and challenge the proof. Space and duration exist of necessity, and that space was eternally filled with primal matter, which I contend is electricity. The scriptures do not inform us that God created all things out of nothing, and surely philosophy cannot inform us how many nothings it will take to make the least conceivable something! Though it is the commonly received opinion that all things were created out of nothing, yet in all ages of the Christian church, there have been some eminent men of all denominations, who have rejected this idea, and contended that all things were created out of some substance. I have not time to refer to those persons this evening, yet permit me to name one. A more orthodox man than John Milton never lived, as all know who have ever read that astonishing production of the human intellect, his "Paradise Lost." He was at war with the idea that all things were created out of nothing. I will present you with an extract from his "Treatise on Christian Doctrine," volume 1 pages 236 and 237. As I quote from memory, I may not be correct in every word.

He says: "It is clear, then, that the world was framed out of matter of some kind or other. For, since action and passion are relative terms, and since, consequently, no agent can act externally, unless there be some patient such as matter, it appears impossible that God could have created this world out of nothing; not from any defect of power on his part, but because it was necessary that something should previously have existed capable of receiving passively the exertion of the divine efficacy. Since, therefore, both scripture and reason concur in pronouncing that all these things were made, not out of nothing, but out of matter, it necessarily follows that matter must always have existed independent of God, or have originated from God at some particular point of time."

So you perceive, Milton contends that both scripture and reason teach that all things were made out of matter. I am under no obligations to prove that all things were not made out of nothing, for no man is bound by the rules of logic to prove a negative. But I will, for a moment, depart from this established rule of schoolmen, and undertake to prove that all things were not made out of nothing. To this end, I will call into my service the following argument:

We raise an axe, and at a single blow cut in two a piece of wood one inch in diameter. Now it is certain that this wood was not severed instantly in all its parts. If it were, then the lower part would have been cut at the same instant that the upper part was, which is perfectly absurd, and therefore impossible. The axe certainly passed gradually through that wood, and progressively separated one grain after another. This you all perceive. By INSTANTLY, we are to understand, that no time shall elapse between the accomplishment of any two objects. It may, however, be said, that there are bodies that move with greater velocity than this axe. I will, then, take another. There is nothing with which we are acquainted, that moves with greater velocity than light; its motion being about twelve million miles in a minute. Hence, the passage of a ray of light from the sun to the earth, would be about eight minutes. It is, therefore, absurd to say that a ray of light could be at the sun and at the earth at the same instant, as it would allow no time for its passage. I will now apply the above argument to the subject before us.

If SOMETHING were created out of NOTHING, it could not, in the nature of things, have been done PROGRESSIVELY OF GRADUALLY, because the instant it became the least possible remove from nothing it would be something. It must, in the very nature of things, remain nothing till it becomes something, because there is no possible process by which it can be gradually brought forward into something, for there is no existing medium between something and nothing. Now, if nothing were created into something, it must have been done instantly; and if instantly, then it must have been something and nothing at the same instant, which is the climax of absurdity. It is just as absurd as to contend that the piece of wood before mentioned was severed at the bottom at the same time that it was at the top, or that a ray of light could be at the sun and the earth at the same instant. I shall hold this argument sound until some one is able to refute it.

Hence, I contend for the eternal existence of PRIMAL matter which is electricity. But even this primal matter does not exist independent of Deity. It is the natural atmosphere or substance emanating from Him. It is evident that every substance in being has its atmospheric emanation, by which it may be detected before we arrive at the body. I say ATMOSPHERIC EMANATION because I know of no other more convenient term, by which I can express my ideas. For instance, the rose, and every species of the flower tribe, have their emanations, which like an atmosphere surround them, and by which we detect their existence before we come in contact with them. For the sake of perspicuity, suffer me to call it atmospheric emanation, which in the above cases is detected by smell. The same is true of every species of trees and plants in being. The same is true of every species of earth, and rock, and mineral, in existence. Each substance has an atmospheric emanation peculiar to itself, and by which it can be discovered by man, or by some other living creature. The camel on the desert will detect water twenty miles distant. The same is true in relation to all the races and tribes of animated beings. Each has its own peculiar atmospheric emanation, by which it may be detected by some other creature, by some instinctive sense of which we have little or no conception. As, then, every substance in being has its own peculiar emanation, so the atmospheric emanation of the self-existent Spirit, is electricity, which, proceeding forth from Him, does not therefore exist independent of him.

It will now be said that, on this principle of reasoning the speaker will make it out that SPIRIT itself is MATTER. If by SPIRIT you mean that which has neither length, breadth, nor thickness, nor occupies any space, then I have only to say that it is a mere chimera of the human brain, a nonentity, a nothing! Does Deity fill all space? Then he is of course a substance, a real, living, acting and thinking being; otherwise, as Christians, we use words without knowledge, when we say that he fills immensity with his presence. But it may be said that MIND is THOUGHT, REASON, and UNDERSTANDING, and then be asked, whether thought, reason, understanding, etc., occupy any space? But I deny that these are mind. Thought, reason, and understanding are not mind, but the EFFECTS of mind. Mind is something supremely higher than all these. I yet ask what is that which thinks, reasons, and understands? It is the mind. Then mind is something distinct from those effects by which it is made manifest. What, then, it may be asked, is mind? I answer, it is that substance which has innate or living motion; and the result of that motion is thought, reason, understanding, and, therefore, power. As electricity is the highest and most subtil of INERT substances, as it fastens on mind, and is, therefore, more easily moved than any other inert substance in being, so mind is the next step above electricity, is the crowning perfection of all other substances in immensity—is living motion; and the result of that motion is thought and power. It is the living Spirit from whom emanates electricity, and who, out of that electricity, has created all worlds. Hence, the Creator is a real substance or being, possessing personal identity, and is infinite in every perfection of his adorable character.

Electricity, which is an atmospheric emanation from God, and which is moved by his will, is that substance out of which all worlds and their splendid appendages were made. Hence, it will be perceived, that electricity contains all the original properties of all the various substances in being. All the varieties of the universe around us—all the beauties and glories of creation upon which we look with so many thrilling emotions of delight, were produced from electricity, which is the inexhaustible fountain of primal matter. By the living energies of the Divine Mind, electricity was condensed into globes; not instantly, but gradually. The heaviest particles took the lowest point, or common centre, of our globe, and so on, step by step, lighter and lighter, till we reach the surface, which is a vegetable mould. On this we find water, a substance still lighter than earth; next air, which is lighter than water, and so on till we reach the sun, which is the highest point in relation to our system, because it is the common centre. The sun is, therefore, pure electricity. Hence, the twenty-nine globes, belonging to our system, are electrically, geologically, and magnetically made. They are but twenty-nine magnets revolving around our sun as a common centre.

The sun, being pure electricity or primal matter, is but an emanation from the Deity. It is, consequently, in a positive state. Hence, electricity is continually passing from the sun, as a common centre, to the twenty-nine surrounding worlds; on the same principle that it passes from a positive to a negative cloud. Having done its duty in giving light, heat, and vegetation, as well as magnetic power to globes, it is returned by reaction to the sun, and these two motions form the vortices that roll worlds around him. It is impossible that there can be any inherent attraction and repulsion in matter. Attraction and repulsion are but different dispositions of electricity. The best magnets are now made fron the galvanic battery. Hence electricity galvanism, and magnetism are but in substance one and the same fluid, and as this is primal matter, an emanation from the Eternal Mind, so all the powers of attraction and repulsion originate in Deity. His will comes in contact with electricity, and through that subtil agent he moves the whole immeasurable universe in accordance with nature's law. All worlds are in motion. They roll rapid as the lightning's blaze, and in the most apparent confusion; yet all is calm, regular, and harmonious. God is, therefore, connected with his universe, and superintends all its multifarious operations. Though he is thus intimately united to inert matter, yet he is distinct from the whole.

> "Thou apart,
> Above, beyond; O tell me, mighty Mind,
> Where art thou? Shall I dive into the deep?
> Call to the sun? or ask the roaring winds
> For their Creator? Shall I question loud
> The thunder, if in that the Almighty dwells?
> Or holds he furious storms in straitened reins,
> And bids fierce whirlwinds wheel his rapid car?
> The nameless He! whose nod is nature's birth
> And nature's shield the shadow of his hand;
> Her dissolution his suspended smile!
> The great First Last! pavilioned high he sits
> In darkness, from excessive splendor borne,
> By gods unseen, unless through lustre lost.
> His glory, to created glory, bright,
> As that to central horrors; he looks down
> On all that soars, and spans immensity."

Worlds are not only electrically, geologically and magnetically made, but they are electrically and magnetically suspended and moved by the immediate energies of the Divine Mind. Here is an image in paper costume. I will attach it to this electrizing machine and charge it. See! those papers are now all suspended, and being equally charged they repel each other. I will now put my fingers near them. See! how they are attracted by my hand. They touch me, give off their electricity, become equalized with my fingers, and then fall. Here, then, is suspension, attraction, and repulsion, by electricity. It may, however, be said, that if worlds are moved by electricity, that they must necessarily move as quick as lightning. This does not follow. Here is an orrery, with which the most of you are acquainted. I attach it to the electrical machine, and charge. You see it is moved by giving off electricity at its points. But though electrically moved, yet it does not move as quick as lightning. The magnet I hold in my hand was charged from the galvanic battery, and by one single stroke of the battery from the prongs of this magnet towards the bow, I can destroy all its magnetic powers, and by reversing the action, I can just as suddenly restore them.

I have now clearly shown that all motion and power originate in mind, and as the human spirit, through an electro-magnetic medium, comes in contact with matter, so the infinite Spirit does the same, and through this medium he governs the universe. Hence, those who deny the mesmeric power, must, to be consistent with themselves, deny that there is any medium through which mind can come in contact with matter, or else deny that mind, abstractly considered, has any power to produce results. But the denial of either of these is a denial of an all-powerful, self-existent Spirit, the Creator and Governor of the universe. But, on the other hand, how sublime the idea, that God is electrically and magnetically connected with his universe; that, by the energies of his own will, he has condensed and formed worlds from electricity, which is but the atmospheric emanation of his own spirit, and that by electricity he sustains, rolls, and governs them from age to age. And how sublime the idea, that he has "poured spirit from spirit's awful fountain, and kindled into existence a world of rationals." He has poured himself through all his works and stamped upon them BEAUTY, ORDER, and HARMONY, which are but the reflected impressions of his OWN SPLENDOR.

LECTURE IV.

LADIES AND GENTLEMEN: It is a source of gratification to me that public attention, in Boston and vicinity is completely awakened to the interests of Spiritualism, and that they are giving this subject that investigation which its importance demands. We live emphatically in an age of investigation and improvement, when light seems to be pouring in oceans on our world; and he who shuts his eyes, and then scoffs and sneers because others open theirs and see, is not only recreant to duty, but does society an irreparable wrong. But those who remain in scepticism much longer on the subject of Mesmerism, will be suspected either of ignorance or dishonesty. I make this remark, because there is no possible apology that any man of common sense should remain in scepticism another day. He can go home and try it upon his children or friends, and test its power, and know its truth, and this every man is bound to do who desires to mitigate human pain, and assuage human woes. The subject is one of paramount consideration, and is worthy of your best affections, your most ardent zeal, and your warmest hopes.

In my last lecture, I took into consideration MIND AND ITS POWERS, and the medium through which it comes in contact with matter. This medium is electricity, and is that eternal, PRIMAL matter out of which all other substances were made. It fills immensity of space; and worlds are successively and continually formed by the condensation of electricity under the living and ever-acting energies of the Eternal Mind. We are floating in an immensity of space that knows no bounds, like the mote in the sunbeam. This is peopled with swarming worlds, in number beyond an angel's computation; and the residue, which has not yet become the abodes of life, order, and beauty, is filled up with primal matter still in its electrical state. Hence, the work of creation has been going on from eternity, and will continue to progress so long as the throne of the self-existent Jehovah endures, without ever arriving at an end in the sublime career of creation. New brother creations are, therefore, every moment rolling from his omnific hand, and that creating fiat will never, never cease. All this is effected by the energies of mind.

In my last lecture, I stated, and, as I thought, conclusively proved, that thought, reason, understanding, etc., were not mind, but merely the results of mind, and gave what I considered conclusive evidence. I, moreover, stated that mind was a substance that occupied space, that it possessed living motion, and that the result of that motion was thought, reason, and power, and gave what I considered proof. But it seems that both of these positions have been disputed, and hence I will once more touch these two points.

If thought, reason, and understanding are mind, then our minds are annihilated every night in sleep. Because, if all the organs of the brain are wrapped in profound slumber, then there is not a single thought stirring in the whole intellectual realm. It will not answer to parry the force of this argument, by saying that the action of blood upon the brain produces thought, and that this action is suspended in slumber, because the blood flows and acts upon the brain in sleep as well as when we are awake; and hence we should, on this principle, think and reason when asleep nearly as well as when awake. This, however, is not the case. If then, thought and reason are mind, I must insist that, in profound slumber, the mind is annihilated, for thought is gone. Hence it is plain, that thought, reason, and understanding are not mind, but the effects of mind.

I will now take a different argument from the one offered in my last lecture, to prove that mind is a substance that has innate motion, and that this motion produces thought. It is admitted on all hands, that the mind resides in the brain, not in the blood-vessels, but in the nerves themselves. Now, if the nerves are very much expanded by heat, it is impossible to sleep. By lying perfectly still upon our beds, there is a coolness steals over the brain. The nerves, by coolness, are made to contract. They continue gently to shrink until they press upon the living substance that they contain, and stop its motion. That moment all thought ceases. Recollect, MIND is that substance whose nature is motion, and the result of that motion is thought. By pressure, by FORCE, it is stopped, and thought is gone. The moment our rest is complete, a nervous warmth comes over the brain. The nerves expand, leave the mind disengaged, it resumes its motion, and thought is the result. As cold shrinks, and heat expands the nervous system, so that we alternately sleep and wake under this double action, so the mind is a living, self-moving, and invisible substance, which is capable of being compressed sufficient, at least, to prevent its motion.

Having made these remarks, which the circumstances of the occasion seemed to require at my hands, I now invite your attention to what is called by sceptics the incomprehensibility and marvellousness of magnetic sleep and who, on this account, openly avow the impossibility and inconsistency of any one being thrown into such a state; and who, whenever they witness experiments to test it, freely use the stereotyped words, "HUMBUG AND COLLUSION," and that, too, with great emphasis, without being able, however, to detect this great, this wonderful imposition on public credulity!

The greatest objection to the truth of the science of Mesmerism arises from the circumstance, that the subject can see in a manner different from the ordinary mode of vision. That any person can see out of the templar region, or out of the top, or back part of the skull, and through solid walls, and in the darkest night they contend is too preposterous to be believed. I deeply regret to say that medical men not only give countenance to such declarations made by the common mass, but are engaged in making the same themselves. But I seriously appeal to them whether they have never seen any patients in a certain state of the nervous system, induced by disease, where they could thus see, and when sensation was so perfectly extinct that amputation might have taken place without pain? Have they never seen a case of catalepsy? If not, have they never seen in medical works well-authenticated cases of this disease reported? Surely they will not deny these things. I further inquire, have they never seen a case nor heard one reported, where patients in a state of catalepsy have been entirely clairvoyant? where they have seen, as no person in the ordinary way of vision can see? I am conscious that they will not hazard their medical reputation by giving these interrogatories an unqualified denial. Of all persons beneath these heavens, medical gentlemen should be he last to sneer at the idea of clairvoyance, or even total insensibility of a person in the magnetic state.

Catalepsy is a sudden suppression of motion and sensation; a kind of apoplexy, in which the patient is in a fixed posture. If the case be an aggravated one, the patient is sometimes senseless and even speechless. To bring this subject directly and plainly before you, I will relate to you an incident which was stated to me about six months ago by Dr. Patterson, an eminent physician of Lynchburg, Virginia. A young lady was taken sick. Her physician, who lived some eight or ten miles distant, was sent for. He found her in a state of catalepsy Though there was no sensation in her body, yet she had occasional fits of talking. He prescribed, stated that he should be there the next evening, and left. The evening came, and a most tremendous storm of rain, with high winds, set in. The darkness was profound. As the family were seated in silence and anxiety in the same room where the patient lay, some one said, "Well, our doctor will not be here to-night." The sick lady answered: "Yes he will; he is coming now; he is riding on horseback, and is all drenched with rain." the family supposing this to be a mere reverie of the brain, a touch of delirium, made no reply. Nearly an hour passed on; and the storm continuing with unabating violence, one of the pensive group again broke the silence, and exclaimed with a feeling of regret, "Well, it is certain our doctor will not be here this dark stormy night!" The sufferer again answered, "Yes he will; he is most here now; there he is hitching his horse; he is coming to the door.' They heard the raps: the door was opened, and in came the doctor I now ask, how did this lady in a state of catalepsy see the physician several miles distant, through the walls of her house, and in so dark a night?

This report was given in a medical journal and well authenticated. And moreover, there are many of a similar character; and of these facts medical men are well aware. Now I appeal to them, who are present on this occasion, that if it is possible to throw the nervous system into a condition by disease, so that the patient can see in a manner entirely distinct from the ordinary mode of vision, THEN, how can they, without presumption, affirm that a person cannot be thrown into a similar state by Mesmerism? It is proved by medical works that such a state of the brain is possible; and who will take upon himself to affirm, that it can be induced by no other means than disease? As a state of catalepsy is thus frequently attended with clairvoyance, and with total insensibility, so that amputation could be performed without pain, then why should we marvel when we see the same identical phenomena clustering around Mesmerism? I have only to say that our surprise is wholly gratuitous.

I appeal to medical gentlemen present. Have you never seen a case of natural somnambulism? There are hundreds of them occur in this city; and, in every town there are those who rise in their sleep, perform labors, and return to their beds without knowing it. In this state they have gone to the top of house-frames, walked on the ridgepoles, and safely descended. They have, in the darkest nights, walked over dangerous and rapid streams on a mere scantling in safety, where a slight loss of balance would have been death, and where it would be impossible for them to have crossed in their wakeful state Women have arisen, and in this state have done the nicest needle-work. And how did these see? Surely not with the natural organ of vision. A young lady at boarding-school, learning to paint miniatures, and on preparing one for examination-day, found that she could be excelled by the other pupils. It worried her much, and to her suprise she found in the morning, that her picture had greatly advanced under the delicate touch of some experienced hand. She charged the deed upon her teacher, who disclaimed all knowledge of the fact. But on the next morning the picture was nearly finished, but the transgressor could not be found. The Preceptress being strongly suspected, secretly sat up and watched. In the dead of night, when all was still, the young lady arose, and in a dark room arranged her work, mixed her colors, and began to paint. Her Preceptress lit a lamp, entered the room, and saw that lady finish her picture. She then awakened her. How did she see how to mix her colors, and to give the nicest touch with her pencil where no human eye in the wakeful state could discern an object? Such facts as these, and even more wonderful, are well known to medical gentlemen. Now, if persons can by some cause be thrown into somnambulism upon their beds, then reason teaches that they may be thrown into the same state and even a much deeper sleep by the magnetic power.

We will now take into consideration the philosophy of Clairvoyance. It is evident that SEEING, HEARING, FEELING, TASTING, and SMELLING, belong exclusively to the mind. And as we have already clearly proved that electricity is the only substance that can come in contact with mind, so it is through the agency of this fluid that sensations are transmitted to the mind Hence, it is through the medium of electricity that we see hear feel, taste, and smell.

The power of sight being in the mind, it is evident that we never saw anything out of our eyes. The whole of this congregation, with all their different costumes, their various complexions and different appearances, and all their relative distances from each other, are struck upon the retina of the speaker's eye, on about the bigness of a quarter of an inch. By the agency of electricity, it is conveyed through the optic nerve to the mind where it is seen. Hence, we never saw a piece of matter, but only its shadow, the same as when you look into a mirror, it is not yourself, but your image that you see. Electricity is that substance that passes through all other substances. Air cannot pass through your cranium, nor through these walls, nor metallic substances. But as all these have countless millions of pores, electricity can pass through them. Now if our nervous system could be charged with the nervo-vital fluid, so as to render the brain positive, and thus bring it into an exact equilibrium or balance with external electricity. then we should be clairvoyant. Because the nervous system being duly charged, and even surcharged, the great quantity of this fluid passing in right lines from the mind, as a common centre, and in every direction through the pores of the skull, renders it transparent Uniting with external electricity which passes through these walls and all substances, which are also transparent, the image of the whole universe, as it were, in this transparent form, is thrown upon the mind, and is there seen, and seen, too, independent of the retina. On this principle the whole of those objects which are opaque to natural vision, are rendered transparent to the clairvoyant, and he sees through walls in succession, and takes cognizance of their relative distances, on the same principle that we in a wakeful state could look through said walls if they were thin, transparent glass. On this principle, if the subject be charged too much or too little, he cannot see clearly. Or if the night be rainy, or even damp, and unfavorable to electricity, then experiments in clairvoyance must fail, or be very imperfect. The subject must be magnetically charged exactly to that degree which will bring him into magnetic equilibrium with external electricity. Then, if the night be favorable, the experiments will most likely prove successful.

For the sake of perspicuity, I will take another position. Why can you see through that window? You answer, because the glass is transparent. But why is it transparent? You again answer, because upon every square inch of its surface there are several thousand pores, and the glass is of that chemical property that it will admit the rays of atmospheric light to pass through them. This is philosophically correct. But remember, it is not the WINDOW that SEES, but it is the INHABITANT in the house that looks out of the window. The question now arises, why can you not see through that wall? If you answer, because it is opaque, yet the query arises, why is it opaque? The wall has certainly as many pores upon the square inch as that glass. The answer is, because the wall is of that chemical property that resists the rays of atmospheric light; and where no light passes through the pores of a substance, that substance must be opaque. This is so far philosophically correct.

We are now ready to ask, why can you see through he eye? Because it is formed on the transparent principle, has a certain number of pores upon the square inch, and, by the skill of the Creator, it is so constituted as to chemically receive the rays of atmospheric light. But you will please to bear in mind that it is not those translucent ORBS that see, but it is the INHABITANT in the earthly house that looks out of those windows of the soul. Even the good book says, when speaking of the faded vision of the aged,—"AND THOSE THAT LOOK OUT OF THE WINDOWS SHALL BE DARKENED"—thus calling these eyes but the windows of the soul. It is the spirit only that sees—that alone possesses the inward living eye; for take the spirit from its earthly house, and what can these eyes—these windows of the fleshly tabernacle—see? They can see just as much as the hands or feet, but no more. Let another question be here proposed. Why can you not see through the skull? You will again answer—because it is opaque. But I again ask, why is it opaque? You reply—because it chemically resists the rays of atmospheric light, and will not allow them to pass through its pores, even though they are as numerous as the pores of the eye. This answer is also philosophically correct; and in this wonderful constitution of the human cranium is made manifest the wisdom of the Creator. For were light admitted through it upon every portion of the brain, it would stimulate its organs to such an unnatural degree as to render the mind incapable of manifesting itself through them in a harmonious and rational manner. Indeed, it would be inconsistent with the continuance of life itself.

As the remarks now made are perfectly simple, and can be comprehended by all, I will now ask—if there were a light so much finer than atmospheric light, and of that peculiar property that it could be made to pass through all substances in existence, could you not then see through that wall as easily as through that glass? Certainly; because the wall would be rendered transparent through the action of that light, and wherever light passes, there must exist the possibility to see objects. The question then naturally presents itself to the mind—is there such a light? I answer—there is, and it is MAGNETIC, OR GALVANIC LIGHT. It exists not only around, but within us. Go into a dungeon of total darkness, and strike your head a sudden blow, and you will see a flash of light. From whence comes that light? It is within you: it is the nervous fluid—the living light of the brain, which is of a galvanic nature. By this concussion it was thrown into confusion, forced from its accustomed channels, and laid suddenly at the footstool of the living mind; and the mind saw the flash. Hence, it is electrically that we SEE, and HEAR, and FEEL, and TASTE, and SMELL. All mesmeric subjects cannot, however, see with the same brilliancy in clairvoyance, when the brain is surcharged with this light. The most distinguished clairvoyants now in the United States, are Jackson Davis, Lucius E. Burkmar, and Walter S. Tarbox, who have astonished thousands; and by their examinations of the diseased, and saving the lives of many, have rendered themselves the benefactors of suffering humanity This galvanic light can be conveyed to the brain independent of the natural eye—the outward organ of vision.

That the above principles are correct, and that TASTE, SEEING, etc., are electrically conveyed to the mind, try the following experiments. Take a half dollar, and a piece of zinc of the same size: touch them separately to the tongue, and you will not perceive any taste; but put the tongue between them, and, in this position, touch the edges of the two pieces together over the end of the tongue, and you will taste a pungent acid. This taste is produced electrically. Zinc contains a greater portion of electricity than the silver, and when they come in contact it gives it off to the silver, and conveys the sensation of taste through the glands to the mind. In further proof of this being electricity, put the half dollar against the gums under the upper lip; open the mouth, and lay the zinc upon the tongue. by moving the tongue up and down, you will touch the pieces together, and every time they come in contact you will not only perceive the same taste before described, but you will see a flash of lightning. Now that this lightning is seen directly by the mind, and independent of the natural organ of the eye, you may enter a dark room, and in the darkest night—close your eyes, and even bandage them,—and yet when you touch those pieces, as described, you will see the flash, even when one from the heavens could not be seen. This flash is conveyed through the nervous system directly to the mind, where alone exists the power of vision. This is not only proof that taste and sight are electrically conveyed to the mind, but also that electricity is that substance which alone comes in contact with mind.

It is the same in relation to the other senses. Even HEARING is not produced by the concussion of the particles of our air, but by the vibration of the particles of electricity conveyed to the mind, and in that tremulous manner through the organ of the ear coming in direct contact with mind. It is impossible, in the nature of things, hat so gross a substance as air can pass the barriers of the ear and enter the brain to produce any sound. But it may be said, that though the particles of air do not enter the brain, yet with a vibrating motion they strike the drum of the ear and convey sound to the mind. This cannot be, because there is no air in the brain itself; and hence, there is no internal aerial medium through which sound could be transmitted to the mind, even if we admit that the concussion of the particles of external air conveyed it to the drum. I yet ask, what is the internal medium beyond, through which that sound is conveyed to the mind? There is no air there; and if it be a vacuum, then no sound whatever can be conveyed. The truth is, that the same substance in tremulous motion, which conveys sound to the drum of the ear, also passes through it into the nervous system, and conveys its oracle to the very throne of the living mind. This is electricity, which is the only correspondent or mediator between mind and matter, laying its brilliant hand upon both parties, and bringing them into communication.

The sense of smell exists in the mind, and from surrounding substances the sensation is electrically conveyed to it. But as smell is so nearly related to taste, the same argument may be applied to both. I will therefore proceed to notice the sense of feeling.

It is generally said that the sense of feeling is in the nerves. But I contend that it belongs exclusively to the mind, the nerves being the mere medium through which it is electrically conveyed to the mind. Indeed, all our sensations, whether of seeing, hearing, feeling, tasting, or smelling, are conveyed to the mind, through the nervous system, from their correspondent organs, which are but the mere starting points, or inlets of sensation And as the nervo-vital fluid, which is of an electric nature, is the only substance that acts through the nerves, so electricity is the agent which conveys all our sensations to the mind. Though it is said that feeling is diffused over the whole system, yet, strictly speaking, this is not true. All feeling is in the mind It is evident that the mind resides in the brain. It is not diffused over the whole nervous system, for when we might be as sensible that thought proceeded from the hand or foot, as from the head. In this case, the loss of a hand or foot would be the loss of some portion of our minds. The spinal marrow is but a continuation of the brain. Branches shoot out, and from these, other branches in infinite variety, until they are spread out over the whole system ten thousand times finer than the finest hair-sieve,—so fine that you cannot put down the point of a cambric needle without feeling it, and you cannot feel unless you touch a nerve. Hence you perceive how very fine the nervous system must be! Of this system, the brain is the fountain, and is the local habitation of the mind.

Now touch the finger to any object, and that touch produces a corresponding action upon the brain, and through the agency of the electro-magnetic fluid, that sensation is conveyed to the mind. It is the mind that feels it, and by habit we associate the feeling with the end of the finger. But amputate the arm, and then touch the correspondent nerve at the end of the stump and he will yet associate the feeling with the end of the finger. But the feeling is not even in the end of the stump. It is in the mind which has its residence in the brain.

I knew a blacksmith who had his leg amputated above the knee When healed, ne put on a wooden leg and resumed his labors in the shop. He could feel his leg and toes as usual, and many times in a day, he would, without reflection, put down his hand to scratch his wooden leg. Being unlearned and superstitious, he supposed that his leg was buried in an uncomfortable position, and therefore, haunted its wooden substitute. He dug it up, placed under it a soft cotton bed, and re-buried it; but all to no purpose. He made the circumstance known to his physician, who told him to find the corresponding nerve on the stump, and he could cause the itching sensation to cease. He did so, and the difficulties were at once overcome.

A gentleman called upon me, in October, 1842, at the house of the Hon. T. J. Greenwood, in Marlboro'. He stated, that he injured his arm, the cords contracted and drew up his fingers, so as perfectly to clench the hand. It gave him great pain, and the arm was amputated just above the elbow. And though three years had passed away, he said there was yet a constant pain as though the fingers were drawn up; and from that contraction the pain seemed to proceed. Now the whole of this difficulty was felt in the brain. If I may be allowed the expression, the brain has its legs and arms, and toes, and fingers. Or allow me to go entirely back. It is the mind which has its limbs and all its lineaments of form, and from which all form, proportion, and beauty emanate.

I observed a moment ago, that the spinal cord was but the brain continued. Now let a knife be inserted between the joints of the spine, and let this cord be severed, and all the parts of the body, below the incision, will be paralyzed. You may now cut or burn the legs, but all feeling is gone; neither can they be moved by the will. The will cannot come in contact with flesh and blood, only through the electro-magnetic fluid. The mind is in the brain, and as the spinal marrow is severed, so the lower parts are separated from the fountain of feeling. The communication of the electrical influence is destroyed between the extremities and the mind, and hence, the extremities can convey sensations to the mind no more.

I might continue the argument to an indefinite extent to prove that all our senses (seeing, hearing, feeling, tasting, and smelling) are in the mind, and that these sensations, through their corresponding organs, are electrically conveyed to the mind, through the nervous system, but I forbear, and proceed, as usual, to the anticipated experiments of the evening.

LECTURE V.

Ladies and Gentlemen: We are again assembled to take into consideration the subject of Mesmerism. Its growing interest in the public mind is manifest, by the increasing throngs that assemble in this chapel, to investigate its claims to truth and science, and the multitudes that are obliged to retire, unable to gain admittance. As several notes, since my entrance into this house, have been handed me, I shall be obliged to omit introductory remarks, and attend to two or three important requests.

An inquiry is made as to the number of degrees or states into which a subject may be thrown. In reply to this, I would say, that there are but five degrees which have, as yet, come under my observation. The first degree is, when the hands or even the whole body of the subject can be attracted by the conjoint action of the mental and physical energies of the magnetizer. The second degree is, when the hands, or body of the subject, can be attracted by the mental energies alone, or by the physical energies independent of any mental effort. The third degree is, when the subject can neither hear nor answer any person but the magnetizer and those who are in communication. The fourth degree is, when the subject can taste what the magnetizer tastes, and smell what he smells. The fifth degree is clairvoyance. I would not be understood that these five degrees always occur in the order I have now stated them; but I mean that there are these five different degrees. Some never seem to go further than the third degree, and no surgical operation should be performed, unless the subject be put completely into this third state, so that no voice but the magnetizer's can be heard. It can then be performed without any pain.

Another inquiry is made, whether any person can put himself into communication with the subject without the magnetizer's consent? I answer, yes. Any person may put himself into communication by ardently fixing his attention upon the subject while another is magnetizing him, especially if he sits near him. Or he may do it by touching, or too freely handling him. He may do it by violently throwing his hands towards him, and within a foot of his body. Or, lastly, he may take two or three electric shocks from a charged Leyden jar, within eight or ten feet of the subject, being careful to fix his eyes firmly upon him while taking the shock. The second or third shock, the subject will start with him who receives it—and when he starts he is in communication.

A third inquiry is made, whether any one but the magnetizer can awaken the subject? Certainly, any person who is put in communication with him can take him out of the state. Or by a firm determination, he can awaken himself. In fact, he may be put in bed, and in a few hours, say from eight to fourteen, he will come out of it the natural way.

A fourth, and last inquiry is made, if magnetism be true, why has not more of it been seen, at least in some small degree, in different ages? I answer, that its history dates back to a very early age which I cannot now pursue, but would refer to "FASCINATION, or the Philosophy of Charming, illustrating the principles of life in connection with spirit and matter," published in New York city by Fowlers & Wells; also to the AMERICAN PHRENOLOGICAL JOURNAL. They are conducted with great ability, and should be in possession of every family But the inquirer asks, "why has not more of it been seen, at least in some small degree, in different ages?" I answer, it has been seen and felt. Have you never read the bold, lofty, and full-gushing eloquence of Demosthenes, whose thunders roused Greece into action, and moved her sons as the wind in its rushing majesty moves the sublime magnificence of ten thousand forests? This was but the magnetic principle, the lightning of the mind, by which they were electrified, and made to act as one man against the powers of Philip. The same is true of Cicero, who shook the Roman senate with his voice, and beneath the electric glance of whose awful eye, even Cataline quailed. I am well aware that you will call this sympathy. But what is sympathy? It is the nervo-vital fluid thrown from a full, energetic brain, upon another of kindred feeling. That brain being roused affects another, and that still another, till the whole assembly are brought into magnetic sympathy with the speaker, and by him are moved as the soul of one man.

As a further answer to this question. I will notice one fact more; and in doing this, I shall remove what has long been considered as a stigma on a large and respectable denomination. I mean the Methodists. Ever since that class of Christians had a religious existence in the United States, persons have fallen down into a species of trance. Other denominations call this delusion, and many call it deception, because such things never occur in their meetings. But there is no deception in this--it is really the magnetic state—or more properly the spiritual state. Every preacher cannot do it, and as it is done without contact, comparatively few are subjects of it.

But take a preacher of strong muscular powers; one who has large concentrativeness, and eye of lightning, and a warm, a sincere, and ardent soul. He enters a tent at camp-meeting, where there are fifteen or twenty persons. He kneels down and prays most fervently; he rises and sings most devotionally. He is in close contact with his little group. He begins to exhort most sincerely; and soon the deep fountains of his soul are broken up. A female, perchance, is moved to tears. His concentration being large, he keeps his eye steadily fixed upon her, and he wills and desires, that she shall feel as he feels, and be converted to God. At length she falls into this singular state. She has gone there in the preacher's feelings, and in his feelings she will come out of it. Now, if he would follow my directions, he could restore her in two minutes. I will pledge myself to arouse any one from this magnetic state in five minutes. Dr. Cannon, of this city, took a lady out of this state a few weeks ago, in Provincetown, who was thrown into it in a religious meeting, and who appeared nearly lifeless. A report of this was published in the "Christian Freeman." Now all these are really magnetic effects that we have seen, and for many years in succession. So the inquiries are all answered, and I hope, to the satisfaction of the inquirers and the congregation.

I must now proceed to notice the dangers and abuses of Mesmerism. It is often said by its opposers, that even if it be true yet it is dangerous, because it can be abused, and therefore ought not to be practised. But do you know of any blessing beneath these heavens but what has been, and still continues to be abused? No you do not. Do you know of a more common blessing than taste? yet to gratify their taste, millions on millions have gone down to a drunkard's tomb! Mothers have been more than widowed, and children more than orphanized. They have been beaten and abused, and suffered cold, and hunger, and nakedness. Under it, crimes have been committed, and the state prisons filled with wretched men. Human beings have also by millions gone down to their graves through excess in eating. But is taste a curse because men abuse it? and must it, therefore, be struck from the catalogue of Heaven's mercies? All answer, no. Acquisitiveness, benevolence, and combativeness can be abused, and so can all the organs of the human brain. But ought they not on that account to be indulged?

Once more: there is not a greater blessing than the Gospel of Christ. It teaches us to love and forgive our enemies; to resist not evil, and to do unto others as we would that they should do unto us. It is calculated to moderate our feelings in prosperity—to comfort us in the day of adversity—and to sustain us under all the troubles and disappointments incident to mortal life. When our parents, friends and children are on their dying bed, we can shake the farewell hand of mortal separation, with the hope of meeting them again in future realms. And not only so, but when we lie down upon the bed of death, and the embers of life feebly glimmer in the socket of existence, then the Gospel of Christ points us to brighter scenes—scenes beyond the tomb.

Yet men have abused that gospel, and one denomination has risen up against another, and doomed each other to the stake. Rivers of human blood have flowed in the holy wars. But is the gospel a curse, and should it be struck from existence merely because men abuse it? No, is the answer of every Christian heart. Then the objection fails. One thing must settle this point. There is nothing that God has established as a law in our nature, but what was designed to be a blessing to his creatures. The magnetic principle is not of man, but one the Creator has established, and is, therefore, a blessing. And if it could not be abused, it would differ from all other blessings he has bestowed on man.

But it is said, that a man upon the high-way may be thrown into the state and robbed. But I deny that any person can be thrown into the state against his will, if he will at the same time use physical resistance. And when in the magnetic state, he has twice the strength to resist, and defend himself, that he has when out of it. We generally know with whom we have to deal, and surely we would not suffer an enemy, nor the unprincipled, to put us into the mesmeric slumber. But if you wish to be safe, and are really fearful of consequences, I will give you a rule of action. It is this: never allow any one to magnetize you unless it be in the presence of a third person. Observe this rule, and no danger arising from this source will ever cross your path.

Having answered these objections, I will now show you where there are real dangers In the first place, though every person can be mesmerized, yet there are but few who can be easily thrown into this state. The greater proportion, by far, would require several hours of hard labor Hence, when one is found who is easy to mesmerize, curiosity is awakened, and every one wishes to make the trial of his power and skill. One mesmerizes this individual in the morning, another in the evening and a new set of operators perform the same task on the next day, and so on. Now, in such cases, there is that mixing and crossing of all these different fluids in the subject's brain, which, if persisted in too long, will prove injurious, even if all these magnetizers are healthy persons. If you mesmerize a person, and thoroughly wake him, yet the whole of that fluid does not completely pass from his brain short of a week. Select one healthy magnetizer, and continue him. If you change to another, then wait a fortnight before you allow him to operate. Too much care in this respect cannot be taken. But I point out to you a still more serious danger.

There are persons who undertake to mesmerize others, who have some local disease, or are in feeble health. By so doing, they injure themselves, and also the subject. Such persons have no nervo-vital fluid to spare, and what little they have is in a diseased state, and unfit to be thrown upon the nervous system of another. I care not what the disease may be, by long persisting in mesmerizing a person, that disease will be, at length, communicated to the subject. Great caution, in this respect, should be observed by both parties, if they would not impair their health. Weakness of lungs, and even consumption, may be, by thirty or forty magnetizings, brought upon an individual, and send him to his grave I therefore seriously admonish you to beware of this common danger. Never allow any person of a poor constitution to put you into this state; and I also warn those who are diseased, or even in delicate health, never to mesmerize others, for they will, by so doing, inflict upon themselves a serious injury

But, on the other hand, there is no danger in a healthy person magnetizing those who are diseased. As the operator imparts the nervo-vital fluid, and does not receive any in return, he is in no danger of taking the disease of his patient. Caution is, however, to be observed in taking the patient out of this state. He should not make the upward passes in such a manner as to throw the fluid on himself. If he do, he is in some danger of contracting the disease. An experienced magnetizer will understand how to avail himself of this caution.

Once more: there are persons who undertake to magnetize others who are entirely ignorant as to the mode of operation, and frequently bring persons into serious difficulty by getting alarmed, or otherwise thrown out of bias in their feelings. Several cases of this kind I have been called to attend to, in various sections, and some of a very serious character. No persons should undertake to mesmerize others until they shall have learned of some experienced magnetizer how to perform it, and made themselves acquainted with all the difficulties that may cluster around it.

Having attended to these important points, I will now turn your attention to local magnetism. By local magnetism, I mean the magnetizing of some part of the human body without charging the whole brain. Hence, the finger, the hand, the arm, the leg, yes, even the eyelid, the lip, or the tongue, may be mesmerized while the person is in the wakeful state, and so may be any of the phrenological organs. It is true, that this cannot be so easily done on persons who have never been mesmerized at all, as on those who have been thrown into the state.

If the brain has been once magnetically subdued, then there is no occasion, even if the amputation of a limb is to be performed, to magnetize any other part than the one to be subjected to the operation. If a person be very hard to mesmerize, then it will be proportionally difficult to mesmerize any limb. But it will be borne in mind, that however long it may take in successive sittings to magnetically subdue the brain, yet after that is once accomplished, then the person can, in future, be wholly mesmerized at any time in five minutes, and locally so in a much less period. Hence, should an arm be broken or mutilated, it will only be necessary to put that limb into the magnetic state, and it can be set or amputated without pain; and thus, by occasionally renewing the mesmeric action, it can be kept in this state and healed, without ever experiencing any suffering whatever.

I perceive that some smile in view of these statements. They are truly so wonderful, that incredulity adjures us to reject them. But they are, nevertheless, Heaven's unchanging truths, which cannot bend to circumstances, nor shape themselves to the belief or scepticism of men. They stand out in bold relief, and bid defiance to the sneers and scorns of mankind. A surgical operation has just been performed in Lowell on a lady while in the mesmeric state. A tumor was extracted from the shoulder, where it was necessary to cut to the depth of two inches. Dr. Shattuck was the magnetizer; and in the presence of several medical men of Lowell, one of whom was the operator, this tumor was removed without the slightest sensation of pain. This was not done in a corner, but publicly, and in the presence of several hundred spectators. It is too late in the day to cry "HUMBUG AND COLLUSION," for the battle is fought, and the victory is won, and the scale has turned in favor of truth, and turned with most preponderating weight, and on the stereotyped argument "HUMBUG AND COLLUSION," is written "TEKEL."

Well authenticated facts, and medical reports of operations in surgery and dentistry, performed under the energies of Mesmerism, in both continents, and without pain, are continually reaching us. And with this flood of light pouring upon the world, and when men of the first talents and science in the republic of letters, and out of all the various professions and denominations, are among its advocates, scepticism is not only waning, but justly losing its popularity. Those men have seriously investigated and weighed the matter, and they severally declare, as did the Rev. Mr. Pierpont, on the last evening, before two thousand hearers, in this house, "I have no BELIEF nor UNBELIEF on this subject. I KNOW, I KNOW it to be so!" And now I ask, what ought the MERE OPINION, or the expressed UNBELIEF of even an honest sceptic, to weigh against the absolute and certain KNOWLEDGE of an equally honest, intelligent, and scientific man, whose character is above suspicion? I leave the candid to judge, and have only to say, that in the face of modesty, they have no right to call this science "HUMBUG AND COLLUSION."

Others pretend that the science of Animal Magnetism was condemned by the French Committee in Paris, among whom our illustrious Franklin was numbered. And as it received its condemnation under the scrutiny of such minds, therefore they conclude that it has no foundation in truth There always have been, and still are, men who dare not think for themselves, but wholly lean upon the opinions of others. Their father, their doctor, their lawyer, and their minister, thought thus and so, and they think just so, too. Their fathers put down a central stake, gave them their length of line, and bid them travel round in that circle of revolving thought till the day of their death! All beyond that circle is darkness! Their field of thought is as exactly measured off to them, and just as legally bequeathed to them, as their farms. They received them both by inheritance. For the one they never LABORED, and for the other they never THOUGHT! And they never questioned the TRUTH of the one, any more than they did their title to the other!

But surely the French Committee did not deny the truth of the experiments produced, nor pronounce them "HUMBUG AND COLLUSION." They simply decided that the evidence adduced was not sufficient to prove that the magnetic state was caused by a FLUID proceeding from the magnetizer. They attributed the singular effects they witnessed to the power of the imagination. But it will also be remembered, that this committee were not all agreed, and hence appeared the remonstrance of the minority, which it would be well for modern sceptics to read, side by side with the report.

Many sceptics have been obliged, like the French Committee, to admit certain results as being truly wonderful, and, like them, attribute it to the force of the imagination. But to believe that the imagination can bring human beings into a state where limbs can be amputated, tumors cut out, teeth extracted, and broken bones set, and the whole healed without experiencing one throb of pain—to believe, I say, that the imagination can do all these wonders, in giving such boundless triumph [illegible] pain, requires a far greater stretch of credulity [illegible] to believe in the magnetic power! And surely if the imagination possesses the wonderful charm to bring the nervous system into a condition where we can bid defiance to pain, and gain a complete victory over the whole frightful army of human woes, then surely the science is equally important, possesses the same transcendent claims upon our benevolence, and the man who discovered that the imagination possessed this charm is worthy of the united thanks of all human-kind; and being dead, his bones are worthy to repose with the great men of the universe. In this case it will only be necessary to change its name, and call it—THE SCIENCE OF THE WONDERFUL POWER OF THE HUMAN IMAGINATION TO CHARM ALL PAIN.

LECTURE VI.

Ladies and Gentlemen: In the first four lectures I delivered of the present course, I brought forward the philosophy of Mesmerism, and flatter myself that I have not only succeeded in establishing it as a science, but have shown it to be one of transcendent interest to the human race. Here love and benevolence stretch out a healing hand over a world groaning and travailing in pain. Those groans, by that silken hand, shall be hushed, and those pains be removed. There is a power basined up in the fountains of the soul, that has long been dormant. But it is rousing up and stirring itself for some mighty action, and is already beginning to gush forth in healing streams on the world. This science is in its infancy, is imperfectly understood, but yet it breathes the breath of mercy as a sovereign cure for all human woes.

In my last lecture, I answered several notes of inquiry, pointed out the dangers of Magnetism, refuted several common objections in relation to its abuses, noticed the utility of the science in performing painful surgical operations, and took a friendly glance at the conduct of men in justifying their scepticism by pleading the general issue of the Report of the French Committee, and concluded by touching lightly upon the power of the human imagination.

I now stand before you in the confident conviction that much good will result from my labors to the cause of benevolence and mercy. I am urged to repeat my course of lectures next week, but it will be out of my power to comply with this request at that time, but have consented to do so, week after next. As this will be my closing lecture for the present, I can render you no greater service than to show what connection this subject has with divine revelation. I am well aware that many will call me an enthusiast, and sneer at, and condemn me for thinking independently. But when the path of duty is plain, and when I am once satisfied of truth, I then go on, and reason, fearless of all consequences. Under such circumstances, I have nothing to do with the inquiry, what will men think of me? I care not what they think, and much less do I care what they say. I suffer no man to invade the sanctuary of my civil and religious rights, and dictate to me how I shall think, or what I shall believe, or what I shall proclaim. I therefore hold no one responsible for what I shall advance in this lecture, nor do I know as there is one, with whom I am connected, who will endorse my ideas.

I believe the doctrine of our Saviour to be a perfect doctrine, and exactly adapted to the bodies as well as to the souls of men. I believe that he is our example to follow, and as he went about doing good, healing sickness, and relieving distress of body, as well as preaching the gospel to heal the moral maladies of the soul, so it is our duty to do the same. It is, moreover, most evident that his doctrine, to the full extent he commanded his apostles to preach it, was to go down to all subsequent ages, so long as human beings should have a habitation on earth. And our Saviour just as much commanded his apostles to heal the sick, as he did to preach the gospel. Now I cannot believe that one half of the power and mercy of his doctrine should cease with the ministry of his apostles, and the other half continue. I cannot believe that its healing efficacy, so far as the body is concerned, should cease, and what was applicable to the soul should continue. If this be so, then what a favored generation of Christians existed in that day, so far, at least, as healing the body was concerned. It was said, in the apostolic age, "Is any man sick, let him send for the elders of the church, and let them lay their hands upon him and pray, and the sick shall recover." I believe this now, and so far as we have power and faith, it can be accomplished now as well as ever.

There is a difference between a miracle and a gift of healing. If an arm be palsied, we know that the difficulty exists in the brain, and that nothing more is necessary than to throw upon it a sufficient quantity of the nervous fluid to bring it into healthy action. The moment this is accomplished, the difficulty existing in the arm, which is but secondary, will be relieved. To restore this, would be a gift of healing, but not a miracle. What, then, would be a miracle? Answer: amputate an arm, and then cause a new one to grow out. Though healing diseases is sometimes called a miracle, yet when speaking of them specifically, they are not so denominated. Paul says, "God hath set some in the church; first, apostles; secondarily, prophets; thirdly, teachers; after that, miracles, then gifts of healings, helps, governments," etc. And there is not a scrap of evidence that these things were ever to cease while the generations of men endured.

Now if our Saviour restored a palsied arm, then there must something have passed from him to the person healed, in perfect accordance with the principles of animal life It must, therefore, in this case, have been the nervous fluid, as this was the only substance that could have restored this arm.

It is undeniably true, that there was always something passed from our Saviour, when he exercised the gift of healing, to the person whom he restored. In evidence of this, you will recollect, that on one occasion, when he was called to visit a sick person, a multitude followed after, and thronged him. As he passed by, a woman, who had been afflicted with an issue of blood for twelve years, touched the hem of his garment, and was made whole. He turned himself around, and said, "Who touched me?" His disciples exclaimed, "Master the multitude throng thee, and sayest thou, 'Who touched me?' But he perceived that virtue had gone out of him." The word VIRTUE, in this instance, does not mean moral goodness. It means FORCE, POWER, EFFICACY; the same as when we say a medicine has great VIRTUE in it.

Our Saviour so lived, and breathed, and moved in the divine Being, that he became one in communication with him; so that when the Father WILLED, he felt that will—He himself then willed, and it was accomplished. So, if any one bowed in reconciliation to God, he became one with the Saviour, so that the Redeemer also, felt that one's will. Such was the case of this woman. She willed in faith to be healed. The Saviour felt that will—He willed, and it was done. Now every being has power in proportion to the energy of his own will; but the energy of the will, depends upon the intrinsic greatness of that being's mind. And as a miracle is a thing performed by the energy of the will

SO THAT mind must be great in power and goodness, that is capable of performing a miracle. We sit down, and put forth the energy of a thousand wills, and at last produce but a small result.

The apostolic power was far greater, and in the same ratio, their results were more splendid and glorious. But still they had not the power of Christ. The leper said, "Lord, if thou WILT, thou canst make me clean. Jesus stretched forth his **hand**, and touched him, and said, I WILL, be thou clean, and his leprosy was cleansed." By a word, he put to right disabled limbs, and drew back life and warm gushing health to their abode. He put forth a greater energy—and said to the winds and waves, Peace! be still! His will fastened upon electricity in the heavens, equalized that fluid hushed the winds, and calmed the waves. He opened the blind eye to the splendor of the noon-tide blaze, and instantly penciled on its retina, the universe. He opened the deaf ear, and poured into its once silent, but now vocal chambers, the harmony of rejoicing nature. He spoke, and the dead stirred in their graves, and rose up from their icy beds before him, and walked. That same dread voice shall speak with a living energy, that the very heavens shall hear, and the dead shall rise to die no more, and turn their eyes from the dark, ruinable tomb on the scenes of eternity! Mind and will in the Creator, still more increased, move unnumbered worlds. That same will, now infinite and immutable. puts forth creative energy. He spake, and it was done; He commanded, and it stood fast; laid the measures thereof, and stretched the line upon it when the morning stars sang together, and all the sons of God shouted for joy. Hence, every grade of mind, from the humblest up to apostolic greatness; up to angel and archangel, cherubim and seraphim; up to Jesus Christ, till it reach the infinite Jehovah, has power proportionate to its greatness and goodness. Hence, it will be readily understood, that a miracle is nothing more than a result produced by mind itself, independent of all physical energy, except that one substance which is put into motion by the living mind.

It may perhaps be said, that the apostles were inspired to heal, and as we are not inspired, therefore we do not possess the gift to heal. On this principle I might reply, that the apostles were inspired to preach, and as we are not inspired, therefore, we have no gift to preach! I grant that the apostles were inspired to preach and to heal, because it was not possible, that at the starting point, they had any other means for preparation. But now men preach, not by inspiration, but because they feel it to be their duty. So men must now heal because they feel it to be their duty.

It is by no means to be expected that we can come up, at once, to apostolic power. No; our faith is too weak. But let us bring up our children in the faith as we ought, and they will learn to mesmerize as naturally as they learn to walk. Their concentrativeness will become largely developed. Their children will be born with more favorably developed heads, and become greater in goodness, until at length the whole apostolic power will return to the earth in all its primitive splendor. It is Spiritualism, because it is the innate power of the living mind, executed through the agency of the will. It is that power which created worlds, for this was done by the will of God. It is that power by which worlds are governed, and creatures ruled, for this is also done by the will of God. It is that power by which we make impressions reciprocally upon each other, for this is done by the will of man. And lastly, it is "that power which shall awake the dead from dreamless slumber into thoughts of heaven," for this will be done by the will of God, and there is no medium, only electricity, through which he can come in contact with his creatures.

I will now bring forward a few cases from Scripture, to show that the living have been thrown into a singular slumber by the very presence of immortal beings. Indeed, there is scarcely an instance where angels have appeared to men, but what it has had this effect. I will bring forward those that first strike my mind, regardless of their arrangement.

It will be remembered, that when John the Revelator was in the isle of Patmos, he had this vision: "And being turned, I saw seven golden candlesticks, and in the midst of the seven candlesticks, one like unto the Son of man, clothed with a garment down to the foc and girt about the paps with a golden girdle. His head and his hair were white like wool; as white as snow, and his eyes were as a flame of fire; and his feet like unto fine brass as if they had been burned in a furnace, and his voice as the sound of many waters. And he had in his right hand seven stars, and out of his mouth went a sharp two-edged sword, and his countenance was as the sun shineth in his strength. And when I saw him I fell down at his feet as one that is dead." Here then, is a singular slumber approximating death.

Our Saviour, when he was transfigured on Mount Tabor, took Peter, James, and John with him. For a moment he was changed into his resurrection splendor and met Moses and Elias in glory. The sacred historian, in describing the scene, says, " And his face did shine as the sun, and his raiment became shining, exceeding white as snow, white as the light, so as no fuller on earth can white them, and there appeared unto them Moses and Elias talking with him. And Peter and them that were with him were heavy with sleep; and Peter said, Lord, it is good for us to be here. Let us build here three tabernacles; one for thee, one for Moses, and one for Elias; not knowing what he said." That is, when he came out of this sleep he did not recollect what he had said. They were thrown into this state by the very presence of these minds.

Do you remember that after our Lord had eaten his valedictory supper with his disciples, he went into the garden of Gethsemane, and commanded them to watch? He went a few steps from them and prayed in agony, and sweat as it were drops of blood falling to the ground. The guardian angel of Jesus Christ appeared from heaven strengthening him. The apostles fell into a deep sleep. Though this was a scene of great interest to them, yet it seems that the presence of this ange thus affected them.

He was nailed to the cross between two malefactors, to darken his glory and blot his name. The Jews were his accusers, and the Romans his executioners. Hence, the world was combined against him, while his own disciples forsook him in that dark hour of peril. The universe thus combined against him, mocking and deriding him, and covering him with disgrace, even nature herself stepped forward as it were, and with a mighty hand wiped off that disgrace, and sustained him in his majesty. The sun withdrew his light, rolled back his chariot, midnight darkness spread her robe of sackcloth upon his brilliant disc, and hung the world in the dark shroud of mourning. Earthquakes awoke from their tartarean dens and thundered. The earth shook, the rocks rent, the graves opened, all nature roused up and there brought to a centre all that is grand, awful, and sublime in her realms, as the magnanimous sufferer expired! He was conveyed to his tomb, and Roman soldiers were there stationed to guard it. Soldiers whose business it was to die,—who had been brought up in tented fields of war, and who had from childhood encountered hardships and toils, fatigues and dangers. They were men, who had often bared their bosoms to the shafts of battle, and undismayed listened to its stormy voice, and who knew not what it was to quail beneath the glance of a mortal eye. Such men as these, were stationed to guard that tomb, and hold the Prince of Life in death. But—

"An angel's arm can't snatch him from the grave;
Legions of angels can't confine him there."

On the morning of the third day, the last grand scene in this interesting drama was opened. The guardian angel of Jesus Christ was once more dispatched from the eternal throne. He descended from heaven, and an earthquake shook creation. He approached the tomb of the Holy Sleeper, and stood before it. "He rolled back the stone from the door of the sepulchre and sat upon it. His countenance was like the lightning, and his raiment white as snow; and for fear of him, the keepers did shake, and become as dead men!"

What, I ask, was it that threw them into this slumber with feelings of a cold shuddering fear, so nigh approaching the dead? I answer, it was the WILL of this angel, whose countenance was like the lightning, that sunk them into a motionless sleep. It was his WILL which struck the vibrations of terror through the dark chambers of their souls, and withered them to the earth.

I should like to notice the circumstance of Paul being caught up into the third heavens—whether out of the body or in the body, he could not tell—of Peter falling into a trance when he went upon the house-top to pray, and of Zacharias being struck dumb in the temple; but time will not permit.

I close, by returning my sincere thanks to the Moderators, for the good order they have preserved; to the various Committees, for their patient examinations and impartial reports of the experiments performed; and to the ladies and gentlemen, for their faithful attendance and respectful attention, and also for the good feelings they have uniformly manifested towards the lecturer during the entire course, which is now brought to a termination.

NOTE.—FROM CHANNING.

"We are created with a susceptibility of pain, and severe pain. This is a part of our nature, as truly as our susceptibility of enjoyment. God has implanted it, and has thus opened in the very centre of our being a fountain of suffering. We carry it within us, and can no more escape it than we can our power of thought. We are apt to throw our pains on outward things as their causes. It is the fire, the sea, the sword, or human enmity, which gives us pain. But there is no pain in the fire or the sword, which passes thence into our souls. The pain begins and ends in the soul itself. Outward things are only the occasions. Even the body has no pain in it, which it infuses into the mind. Of itself, it is incapable of suffering. This hand may be cracked, crushed in the rack of the inquisitor, and that burnt in a slow fire; but in these cases it is not the fibres, the blood-vessels, the bones of the hand which endure pain. These are merely connected, by the will of the Creator, with the springs of pain in the soul. Here, here is the only origin and seat of suffering. If God so willed, the gashing of the flesh with a knife, the piercing of the heart with a dagger, might be the occasion of exquisite delight. We know that, in the heat of battle, a wound is not felt, and that men, dying for their faith by instruments of torture, have expired with triumph on their lips. In these cases, the spring of suffering in the mind is not touched by the lacerations of the body, in consequence of the absorbing action of other principles of the soul. All suffering is to be traced to the susceptibility, the capacity of pain, which belongs to our nature, and which the Creator has implanted ineradicably within us."

PSYCHOLOGY;

OR THE

SCIENCE OF THE SOUL,

CONSIDERED

PHYSIOLOGICALLY AND PHILOSOPHICALLY.

WITH AN APPENDIX, CONTAINING NOTES OF MESMERIC AND
PSYCHICAL EXPERIENCE.

BY JOSEPH HADDOCK, M.D.,

WITH ENGRAVINGS OF THE NERVOUS SYSTEM.

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PREFACE.

THIS work was recently published in **LONDON** under the following title: "SOMNOLISM AND PSYCHEISM, otherwise VITAL MAGNETISM or MESMERISM: considered Physiologically and Philosophically: being the substance of lectures delivered under the auspices of the Bolton Mechanics' Institution; with an Appendix, containing notes of Mesmeric and Psychical experience."

We have taken the liberty to omit, in our title, such terms as may not be fully understood by all readers; taking care, however, to make it equally appropriate.

The subject on which this work treats, is fast becoming of the most absorbing interest to our people, and it gives us pleasure to place before the American public the conclusions of those who have penetrated most deeply into these supposed mysteries of nature.

We look forward, hopefully, for the time when we may KNOW those things which the world have always "believed" to be truths. Nor is it **POSSIBLE** for **ANY** influence to **LIMIT** the desires of the human mind to investigate, until it has penetrated every subject which comes within the range of its comprehension.

May this work go forth to "open the eyes of the (spiritually) blind," and excite to further investigation and reflection those minds best capacitated to evolve "new light" on intellectual and spiritual vision.

This is a progressive age, not only in moral and physical development, but in spiritual science.

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INTRODUCTION.

1. One of the striking characteristics of the present age, is the vast amount of knowledge respecting external objects, which has been accumulated in a comparatively short period. For within the compass of human life, so extensive has been the discovery of the physical properties of natural substances, that Chemistry, although of ancient date, may be considered as a new science; and Geology has opened a new world to human enquiry. While man has thus been permitted to increase his knowledge of the world without him, we might reasonably expect that some additional knowledge would be acquired of the world within him. That his knowledge would not be confined to the superstitions of the dark ages, or to the assumptions of self-constituted authority on the one hand; nor to the barren negations of a sceptical philosophy on the other hand; but that something real, positive, and satisfactory, should be learnt respecting his own constitution. For what knowledge can be so interesting to man, as a knowledge of himself? of the nature, powers, and capabilities of his own being.

2. To every calm, and well-informed enquirer, it will, I think, be evident, that the remarkable phenomena of what is called Mesmerism—or, as it is con-

sidered that it may more properly be called—PSYCHEISM, *rightly interpreted*, do afford us the means of acquiring a knowledge of the laws and nature of the psychical, or mental part of our being, as much transcending what is commonly known, as the recent discoveries in magnetism and electricity exceed the ancient ideas of those natural powers; and at the same time, they afford us the means of becoming better acquainted with the more abstruse points in our bodily organization also.

3. The discoveries and doctrines of an enlightened physiology, teach us, that all the forms and forces of the entire universe are found in their highest perfection in the bodily form of man; and that in him, as the *Microcosm*, or little world, is to be found all that exists in the *Macrocosm*, or great world of the universe. And as in the great world without us, the most astonishing and transforming powers are displayed by those subtle, imponderable, and invisible elements, which elude the most acute physical senses, even when aided by the highest artificial means; so in the world within us, the most wonderful and unexpected powers are manifested by those psychical or mental operations, by which the laws and developments of the world of mind are capable of openly being displayed before our physical sight.

4. But the curious and interesting phenomena displayed by Mesmerism, instead of being calmly and carefully investigated by all enquiring minds, especially by those whose profession or pursuits ought to have interested them in the enquiry, have, in too many instances, been scornfully and contemptuously neglected.

Authority, instead of lending its aid to elicit the truth, has rather scowled upon the attempt which has been made to lift the veil under which truth has been concealed; and in some cases, has misrepresented the character and intentions of those, who, at any cost, were determined to seek her for themselves. It is possible indeed, that the very remarkable results said to flow from the enquiry—results, so different to the expectations and ideas of a materializing age, and in some respects, disclosing matters which seem to clash with established opinions—may have been the reason, for this unfair, and certainly unphilosophical mode of proceeding. But, granting that the most astounding statements made by mesmeric experiments are true, they are not, when properly considered, more wonderful than things now universally admitted as facts. Look at the wonder-working electric telegraph! The elements on which that invention rests, must be as old as the present order of things; yet if any one in the middle of the last century had ventured to assert that, by human ingenuity, electricity or magnetism could be made to transmit *human thought* with mathematical precision, and yet with the velocity of light, he would have been set down by the practical authorities of that age as a dreaming theorist, or an enthusiastic visionary. To *us*, however, the visionary theory has become a reality; and yet what magnetism or electricity *really are*, is no more known to us than it was to our great-grandfathers. The truth is, the mode has been elicited, by which certain comparative unknown mediums may be practically applied to subserve the purposes of social life; and herein, and for all practical purposes, consists the *useful discovery*. If we shall never know what magnetism and electricity in themselves really are, we certainly do know much of the mode by which their laws and powers may be developed and manifested: we have discovered a mode of working mediums altogether unknown to our ancestors.

5. Just so, I apprehend, it is with the discoveries of Mesmerism. Here is, in fact, a discovery of a new mode of working an old medium. That mind and matter are both necessary to form the peculiar organism we call man, is no new doctrine; but the true nature of the body, as the mind's medium or instrument, and of the *necessary organization* of that superior indwelling power—the soul or mind, which directs and controls the outward form, has been somewhat overlooked. Metaphysicians have studied mind irrespective of form or matter; and some philosophers would resolve all things into material operation, irrespective of mind. I believe that fact and demonstrative evidence will prove both classes of philosophers to be wrong. From Divine Revelation we know that there is both spirit or mind, and matter; both a spiritual body and a natural body. These cardinal truths will be found to lie at the bottom of all mesmeric experience, and from that experience, the *a priori* statements of the Scriptures will receive abundant confirmation. And we shall see that in our present state of existence, if we wish to study mind or spirit, we must study it as manifested in its divinely appointed, and true correspondent instrument, the material bodily organization.

6. With some of the mind's operations, and the bodily functions and sensations thence ensuing, we have

become so familiar, that we scarcely ever stop to think of the perpetual miracles involved in our daily experience. Thus the great blessing of sight involves, as we shall point out presently, a fact which all the philosophers that have ever lived have been unable to explain! Yet when some manifestation of mind or spirit, which has hitherto eluded general notice, is brought before us, although it may not be more inexplicable than natural sight, yet we are apt to deny the possibility of the declared manifestation, simply because we were not previously acquainted with it—apt to make our present standard of knowledge the measure by which all future acquisitions are to be estimated. Sometimes too, we are told authoritatively, that it is impossible for us to know any thing of mind or spirit. What, I ask, do we know of matter? Simply some of its *laws* and *properties;* and from these we predicate its *qualities.* So it is with mind or spirit; Mesmerism, or more truly Psycheism, furnishes us with a means of acquiring an experimental acquaintance with some of its most distinctive qualities—distinctive I mean with respect to the qualities of inert matter. Whether we shall ever know what spirit or what matter really is, remains for a higher stage of existence to determine. It is privilege enough to be enabled to know something of the laws and properties of that higher and imperishable organism, to which our outward bodily organism is subservient.

SOMNOLISM AND PSYCHEISM

ORIGIN OF MESMERISM.

7. In the records of past ages, we have many statements of remarkable mental or psychical manifestations, and also of the performance of extraordinary cures, by mental or moral agency, which ignorance and superstition have ascribed to *miracle* or *magic*. And hence, cases resting on the best historical authority, have been doubted, and even denied in later times. Toward the close of the last century, the existence of some of these powers was discovered, partly from accident and partly from research; and to the agency by which they were accomplished, the name of Animal Magnetism was applied by its modern discoverer—Mesmer. This individual has been represented in works of authority as an impostor and cheat, and as owing his celebrity entirely to the silly credulity of imaginative people. Few persons who have really taken the trouble to enquire into the matter, would now hazard such an assertion; yet, whether from ignorance of the true cause of the phenomena he witnessed, or from a desire to mystify the subject, it must be admitted that he both did and said many things which justified suspicion

8. Anton Mesmer was born in 1734, at Mersburg, on the shores of the Lake of Constance; and died in his native place in 1815, at the advanced age of eighty-one. At the age of forty-two he took the degree of Doctor of Medicine, in the University of Vienna. He appears to have been a man of an imaginative cast of mind; for the inaugural Thesis he published on obtaining his degree, was "On the influence of the Planets on the Human Body." Such a mind, if likely to fall into many errors, was still open for the reception of any new ideas which might present themselves; and was not prone, as men of a more sceptical cast, to reject any new truth, because it did not harmonize with preconceived opinions. The then Professor of Astronomy, at Vienna, believed in the efficacy of the loadstone as a remedy in human disease; and he had invented a peculiar form of magnetized steel plates, which, it is said, he applied to the cure of disease with much success. Mesmer obtained from the Astronomer, who was his personal friend, these magnets, and applied them in his own way; and it is said, with such striking results, that he communicated them to the Astronomer, who published an account of them, but attributed the cures performed to the *form of the plates*, and merely represented Mesmer as a physician employed by him to use them. Mesmer, who had discovered the peculiar mode of using them to insure success—that was, in fact, by *manipulations*, now called PASSES—was indignant at this, and accused his friend of a violation of the confidence placed in him. The result was a controversy between the parties; each accusing the other. Notwithstanding this quarrel,

Mesmer proceeded in his own way, and acquired considerable popularity. But, whether from indiscretion on his part, or jealousy on the part of others, he was opposed by the scientific authorities of Vienna, and was ultimately obliged to quit that city.

9. In the year 1778, two years after obtaining his degree, he arrived at Paris, whither his popularity appears to have preceded him; for we are told, even by his enemies, that upon his opening public apartments in that gay metropolis, for the reception of patients, they were speedily crowded by the numbers who daily resorted to them, including all classes, from the peer to the peasant; and that hundreds were ready to testify to the cures wrought upon their own persons by the Great Magnetizer. Now, making every allowance for *imagination* or *fancy*, striking results must have followed his treatment, or no such enthusiasm could have been raised in his behalf. A French physician became a disciple of Mesmer, and is said speedily to have acquired the best practice in Paris. So great, in fact, was Mesmer's success, that the French Government took up the matter, and offered him a large annual income, if he would communicate his secret, and they appear to have thought so highly of the USE to which this new agent might be applied, that they actually proposed to guarantee him a large sum, even if a commission appointed to examine the subject should make an unfavorable report! Mesmer, however, did not accede to the government proposal. After some time, and divers vicissitudes, the sum of £14,000 was raised by his disciples, whom he had instructed in his art, but whom he did not consider entitled to practice

it publicly—a right which they considered themselves to possess. Mesmer then returned to his native place; and this has been represented as "running away from his dupes;" but it appears that he retained faith in his views, and in his last illness sought relief from his own discovery.

10. As Mesmer's discoveries arose out of the use of magnets, it is not surprising that he should consider Magnetism as the agent by which the effects he witnessed were produced. He therefore taught that there was a fluid, or gas, universally diffused, which influenced the earth, and planets, and all animated bodies, and this fluid he called "Animal Magnetism." He considered that it was capable of healing diseases of the nerves immediately, and other diseases mediately; that it perfected the action of medicines, and tended to promote favorable crises in disease; and that in Animal Magnetism, nature presented a universal method of healing the diseases, and preserving the health of mankind. The great end of Mesmer's proceedings, appears, therefore, to have been USE—the application of a remedy for human suffering; and he does not appear to have been aware of the more curious, and distinctly psychical phenomena elicited by later enquirers. To the Marquis de Puysegur, a French nobleman, one of Mesmer's disciples, is attributed the discovery of the faculty called Clairvoyance, in the year 1784.

11. For the sake of brevity, I omit describing Mesmer's mode of operating, save that among other means for acting on his patients, he had a sort of box, filled with iron filings and pounded glass, placed in the centre of the room where they assembled; and that they each

were placed in connection with it, by means of polished metal rods, which they held in their hands; and the patients were further united and connected by means of a chain encircling them. When the French Commissioners applied to this box the usual tests for *terrestrial* magnetism, and found no indication of ordinary magnetic influence, they reported that the whole was the work of *imagination*, meaning *fancy;* yet admitting that cures were effected. This Commission seems to have been both a prejudiced and unfair one. The name of Dr. Franklin occurs among the Commissioners, but he was at the time unwell, and incapable of attending to the enquiry; and while the public report condemned Mesmer and his proceedings, one of the Commissioners, who had paid the greatest attention to the proceedings, published a private or individual report favorable to him. But in the year 1826, the French Government appointed a second Commission, and their Report, published in 1831, fully admits the truth of all the phenomena usually ascribed to Animal Magnetism. However, our business is not so much with the opinions of Mesmer, or that of his friends or enemies, as with that of the facts and phenomena associated with his name. It was soon discovered that the steel rods had but little if any thing to do with the phenomena produced; but the name of Animal Magnetism continued to be used, and is still used on the Continent, and by this name the practice was introduced into England a few years ago. But the English enquirers into this remarkable human faculty, finding that the use of a name, which implied the existence of a fluid which could not be demonstrated to the senses, was frequently turned into an argument against facts which admitted of complete demonstration, adopted out of respect to the memory of Mesmer, and to avoid the appearance of the adoption of any theory of their own, the name of MESMERISM; just as Magnetism is applied to the properties of the loadstone, from Magnes, the ancient reputed discoverer of its powers, or Galvanism, to the discoveries of Galvani. We therefore proceed to notice the facts and phenomena associated with the names of Mesmerism, or Animal Magnetism, and shall endeavor to ascertain the Laws and Causes to which these phenomena may be referred.

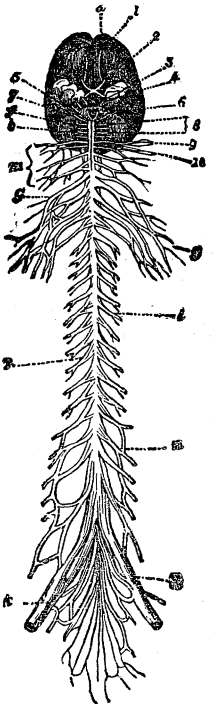
PHENOMENA AND PHYSIOLOGY OF MESMERISM.

12. There are several stages or degrees of what is called Mesmeric Influence; or, in other words, the Mesmeric or Psychic State, involves *a variety of states*, having one common character, but presenting widely differing phenomena. Thus, there is *simple Mesmeric* DROWSINESS or SLEEP; COMA, or more profound sleep; INSENSIBILITY TO PAIN; this, I believe, only occurs when the Mesmeric Coma is fully established, and most of the external senses, together with the proper consciousness of external objects is rendered dormant; and the internal faculty of imagination is called into activity, without the guidance of true reason. PHANTASY, or that state in which the Mesmerised

person takes the mere suggestions of the mind of the operator to be realities. PHRENO-MESMERISM, or the manifestation of the Phrenological sentiments and feelings, which is but another form of simple imaginative action; TRANSFER OF STATE AND FEELING, or that Imaginative action which causes the patient to feel what is done to the Mesmeriser, as if it were done to him; MENTAL ATTRACTION, or apparent Magnetic drawing of the person of the patient, even contrary to his inclination. CEREBRAL LUCIDITY, or apparent illumination of the Brain; with other forms of what is called CLAIRVOYANCE; but which I think would be better called INNER VISION, or INTERNAL, or SPIRITUAL SIGHT. Assuming, therefore, for the present, that these phenomena exhibit a series of great and important facts, which cannot be set aside, neither by reason nor ridicule, I proceed at once to enquire—How we are to understand them? In what way to account for the curious and interesting manifestations thus cast upon our notice?

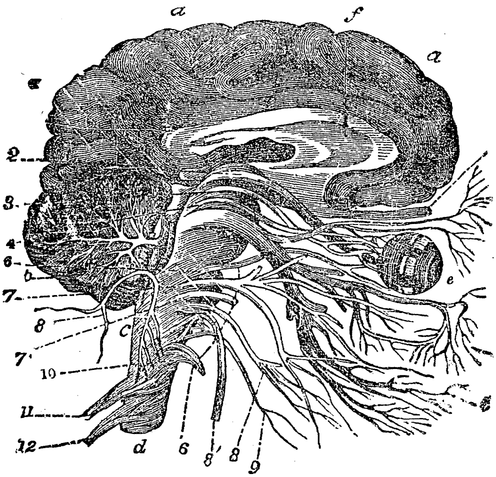
13. We must now therefore examine the *medium* by which the mind acts upon the bodily organization—namely, the BRAIN and NERVOUS SYSTEM. It is common to speak of the nervous system, as consisting of the brain, the spinal marrow, and the nerves springing from them. This arrangement is true enough as far as it goes; but it is not sufficiently particular for our purpose. For upon examining the interior of a human head, it will be found that every individual *has two distinct brains.* These two brains are very different in size as well as form and convolution. The upper and very much larger portion, and which in fact

CEREBRO-SPINAL AXIS.



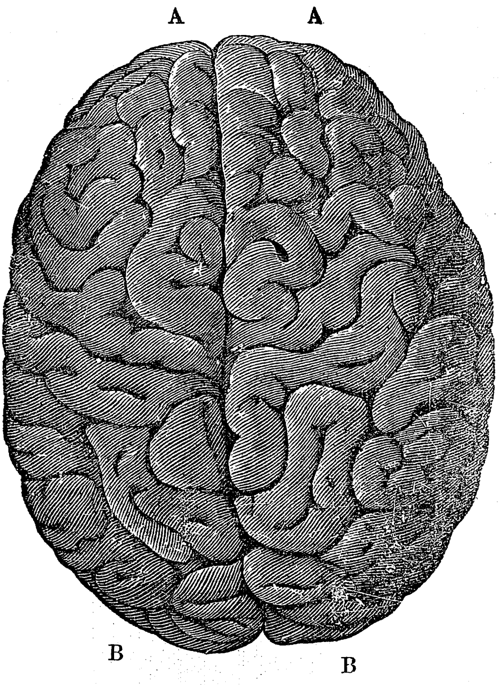
a, The brain.
b, Cerebellum.
c, Medulla oblongata.
g g, Nerves distributed to the arms.
k k, Great sciatic nerve distributed to the lower limbs.
l, Dorsal, and n, Lumber nerves.
m, Plexus of cervical nerves.
1, Olfactory nerve.
2, Optic nerve.
3, 4, 5, 6, The third, fourth, fifth, and sixth nerve.
7, Portio dura of the seventh nerve
8, Auditory nerve and par vagum
9, Hypoglossal nerve.
10, Sub-occipital nerve.

THE NERVES OF THE BRAIN.



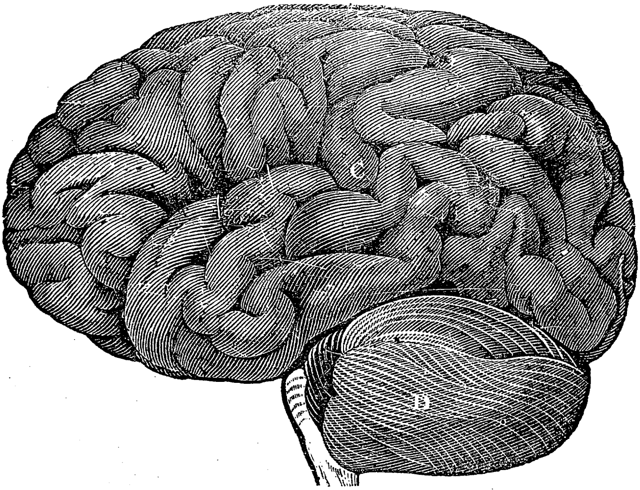
a a a, Convolutions of the brain.
b, Cerebellum and arbor vitæ, or tree of life.
c, Medulla oblongata.
d, Upper part of the spinal cord.
e, Eye.
f, Lateral ventricle.
o, Corpus callosum
n, Pineal gland.
s, Quadrigeminal bodies.
1, Olfactory nerve.
2, Optic nerve.
3, 4, 5, 6, Third, fourth, fifth, and sixth nerves.
5', 5'', Branches of the fifth nerve,
7, Portio dura of the seventh nerve.
7', Auditory nerve.
8, Glossopharyngeal nerve.
8', Par vagum.
8'', Spinal accessory nerve.
9, Hypoglossal nerve.
10, Sub-occipital nerve.
11, 12, First and second cervical nerves.

VIEW OF THE TOP OF THE BRAIN.



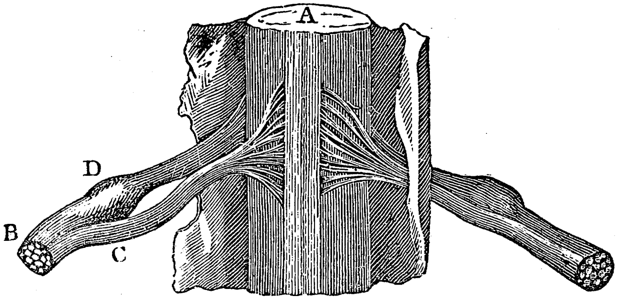
AA, Front part of the brain.
AA, BB, Right and left hemispheres.

SIDE VIEW OF THE BRAIN.



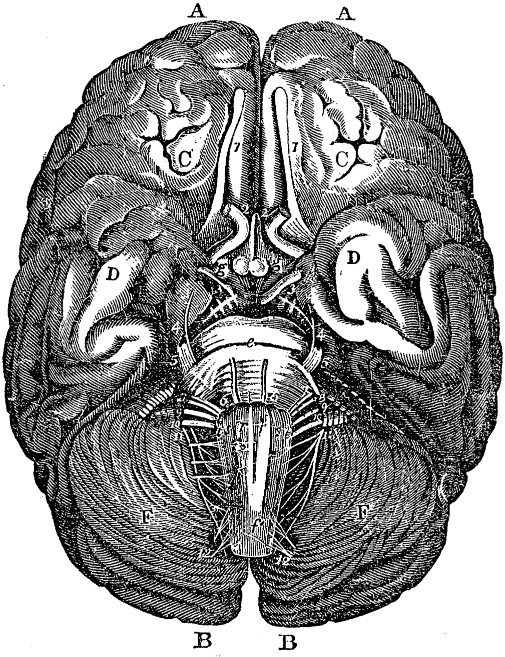
C—Cerebrum. D—Cerebellum. E—Medulla oblongata.

FRONT VIEW OF A SECTION OF THE SPINAL CORD AND NERVES



A—Spinal cord. B—Spinal Nerve. C—Motor branch of spinal nerve.
D—Ganglion of posterior branch of spinal nerve.

VIEW OF THE STRUCTURE OF THE BRAIN.



AB, AB, Are the right and left hemispheres of the brain.
FF, The cerebellum.
AA, The anterior lobe.
e e, The line which denotes the separation between the anterior lobe and the middle lobe
DD, The middle lobe.
BB, The posterior lobe.
e, The *pons Varolii*, which brings the two sides of the cerebellum into communication. It is also named the *Tuber annulare*.
f, The *Medulla oblongata*.
r r, The *Corpora pyramidalia*.
s s, The *Corpora olivaria*.
t t, The *Corpora restiformia* are on the opposite side of the corpora pyramidalia.

1. First pair, or olfactory nerves, arise by three origins. These unite and proceed forward and inward in a groove in the inferior surface of the anterior lobes of the brain, and form a greyish swelling or ganglion. From this ganglion a great number of filaments proceed through the cribriform plate of the ethmoid bone, and are distributed upon the mucous membrane of the nose. It is the nerve of the sense of smell.

2. Second pair, or optic, arise principally from the anterior *corpora quadrigemina.* Each nerve passes outward through the optic foramen in the sphenoid bone, and is expanded upon the retina. It is the nerve of the sense of sight.

3. Third pair, or *motores oculorum,* originate from the motor tract of the spinal cord, immediately after they have passed through the *pons Varolii.* Each nerve escapes through the sphenoidal fissure, and supplies five of the muscles within the orbit with motor filaments.

4. Fourth pair, or *trochleares,* originate from the *processus e cerebello ad testes* and *valvula* of Vieussens. Each nerve passes out from the cranium at the sphenoidal fissure, and is entirely distributed upon the superior oblique muscles of the eyeball. It is a motor nerve.

5. Fifth pair. These nerves issue from the surface of the brain, near the junction of the *pons Varolii* and *crus cerebelli,* but actually arise from the restiform bodies. Each nerve escapes from the cranium by three separate openings, and is extensively distributed upon the orbit and other parts of the face. Part of the filaments of this nerve are *sensitive,* and part *motor.*

6. Sixth pair originate from the pyramidal bodies, as they are about to enter the *pons Varolii.* Each nerve escapes through the sphenoidal fissure, and is entirely distributed upon the external rectus muscle of the eyeball. It is a motor nerve.

7. *Portio dura* of the seventh pair originate from the restiform bodies. Each nerve is extensively distributed in the muscles of the face and external ear. It is the motor nerve of the muscles of expression of the face.

8. *Portio mollis* of the seventh pair, or auditory nerves, (eighth pair of some authors), arise principally from a small grey swelling on the upper surface of the restiform bodies at the side of the fourth ventricle. Each nerve is distributed upon the internal ear, and is the nerve of the sense of hearing.

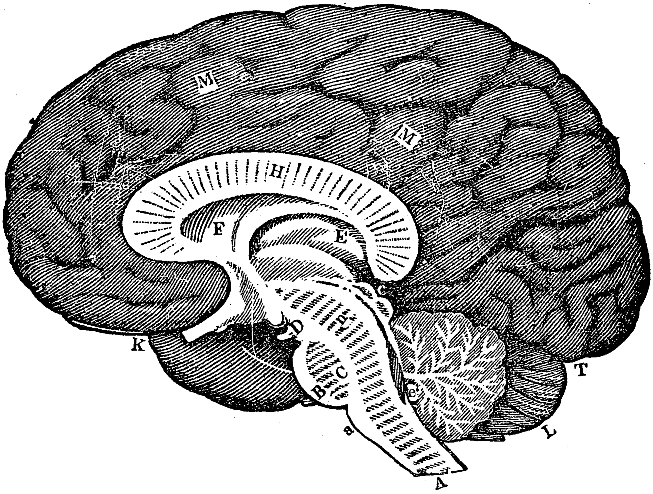
9. Glossopharyngeal nerves, or upper division of the eighth pair, (ninth pair of some authors), arise from the restiform bodies near the sulcus which separates them from the olivary, and are distributed upon the pharynx and mucous membrane at the back part of the tongue. It is a sensitive nerve.

10. *Par vagum,* or pneumogastric nerves, or principal division of the eighth pair, (tenth pair of some authors), originate in the same line with, and close upon, the glossopharyngeal. These nerves are extensively distributed upon the larynx, pharynx, trachea, œsophagus, heart, lungs, and stomach. Part of the filaments of this nerve are sensitive, and part are motor.

11. Spinal accessory nerves, or lower division of the eighth pair, (eleventh pair of some authors), originate from the upper part of the spinal cord, in the same line with the two preceding nerves. They enter the cranium by the foramen magnum, and pass out again from the cranium through the foramen lacerum, along with the other two divisions of the eighth pair. It is principally, if not entirely, a motor nerve.

12. Hypoglossal or ninth pair, (twelfth pair of some authors). Each originates from the sulcus between the pyramidal and olivary bodies, and escapes from the base of the cranium through the anterior condyloid foramen, and is distributed upon the muscles of the tongue It is the motor nerve of the tongue

THE RIGHT HEMISPHERE OF THE BRAIN.



MM, Convolutions, flat—color, reddish grey.

A, Medulla oblongata cut through the medium line. Color—outer portion, bluish white; inner portion, reddish grey.

a, Pyramidal body.

B, Pons Varolii, or tuber annulare. Color—white outside; inside, reddish grey.

c, Tubercula quadrigemina.

D, Crus cerebri.

E, The great inferior ganglion—posterior striated body (thalamus)—color, bluish white.

F, The great superior ganglion—anterior striated body—color, reddish grey.

G. Annular ganglion.

H, Corpus callosum—color, bluish white.

K, Fissura Silvii.

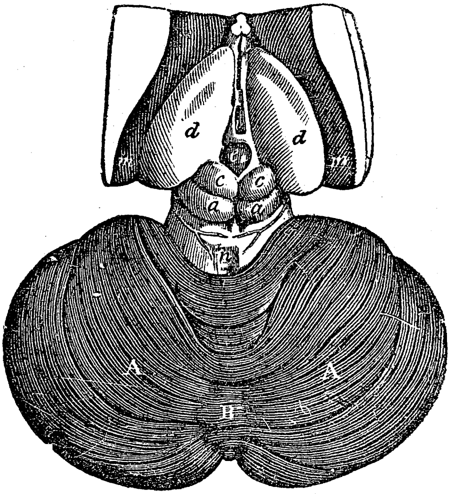
L, The cerebellum.

e, The arbor vitæ—color, white, in the reddish grey ground of the incised cerebellum.

T The tentorum, separating the cerebellum from the brain.

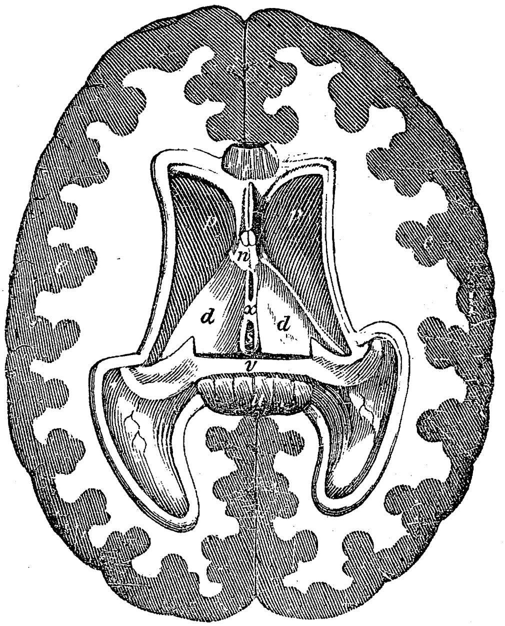
n, Locus niger

THE CEREBELLUM.



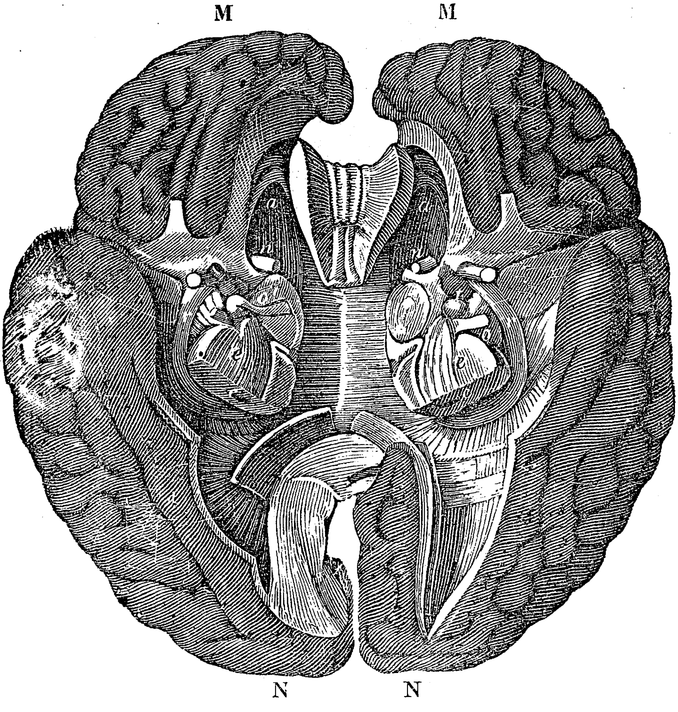
AA, The cerebellum—color, reddish grey
B, Processus vermiculares.
n, Processus e cerebello ad testes—semi-transparent—color, bluish white.
a a The posterior corpora quadrigemina—color, bluish white.
c c, The anterior corpora quadrigemina—color, bluish white.
d d, The great inferior ganglions—posterior striated bodies (thalamus)—color, bluish white
m m, Posterior part of the great superior ganglions—anterior striated bodies—color, reddish grey
e, Pineal gland—color, reddish grey
t, Third ventricle.

HORIZONTAL SECTION OF THE BRAIN.



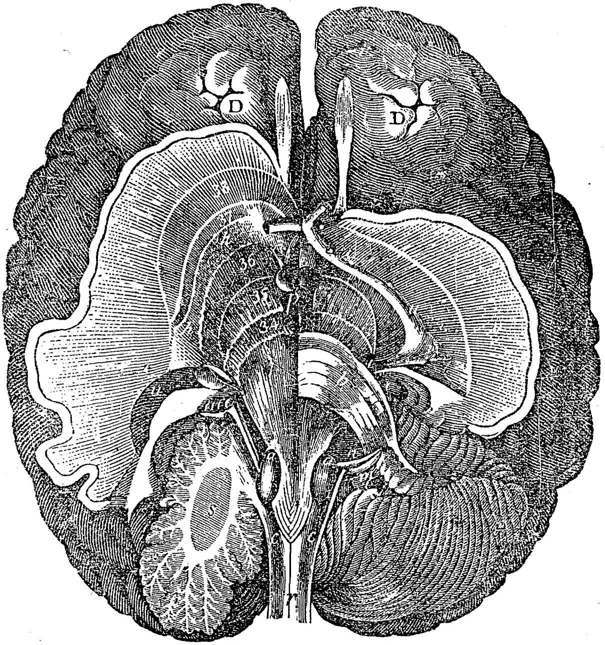
c c, Convolutions, or cortical part of the brain; color, reddish grey
z, Fourth ventricle.
v, Posterior commissure; color, white.
s, Third ventricle, or separation between the great ganglions.
d d, Great inferior ganglions; color, bluish white.
x, Middle commissure.
n, Anterior commissure.
p p, Great superior ganglions—striated; color, reddish grey.
i Anterior opening into the lateral ventricles.

THE CEREBELLUM, ETC.



MM, The anterior part of the brain.
NN, Posterior part of the brain.
e e, Vertical sections of the great inferior ganglions; color, bluish white.
c c, The black substance in the centre of the great inferior ganglions.
o o, The cords of the mammary bodies which plunge into the interior of the great inferior ganglions
t, Mammary body of the right side, the left being cut away.
r r, Optic nerves.
n n, Olfactory nerves.
a a, Great superior ganglions; color, reddish grey.

VARIOUS PARTS ABOUT THE BASE OF THE BRAIN



r, Medulla oblongata.

c c, Decussation of the fibres of the pyramidal bodies, which explains the influence of the lateral cerebral parts of the brain upon the opposite sides of the body. These fibres cross the mesial line of the body one above another from below, upward, like plaited straw. Those of the right side come from the left pyramidal body, and those of the left side from the right pyramidal body, and is a constant peculiarity, modified only by the number of decussating fibres. They are contracted in their course in passing the olivary bodies a a, and then diverge as seen in the figure.

m, Auditory nerve.

n, Facial nerve. The primary bundle of fibres of the cerebellum are here seen to plunge into it between these nerves.

t, Part of the annular protuberance, or pons Varolii, plunging into the cerebellum.

Cerebellar ganglion.

p, Mammary bodies, with the diverging cords to which they are attached.

u, Optic nerve. " The optic nerves decussate partially, and is the cause why the eye is frequently deranged on the same side as that on which the brain is diseased."—*Spurzheim.*

h h, " Nervous fibres that expand in the convolutions and contribute to their formation." *Spurzheim.*

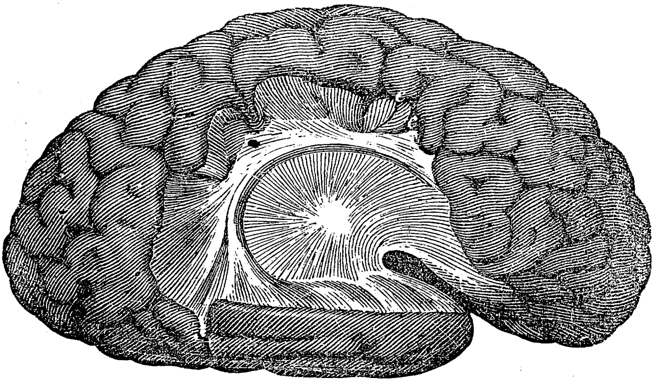
i i, Olfactory nerves.

v, Side of the great lateral ventricle.

34, 35, 36, 37, 38, The fibres which pass through the great cerebral ganglions, and ultimately expand into the convolutions of the brain.

DD, Converging convolutions.

RIGHT HEMISPHERE OF THE BRAIN.



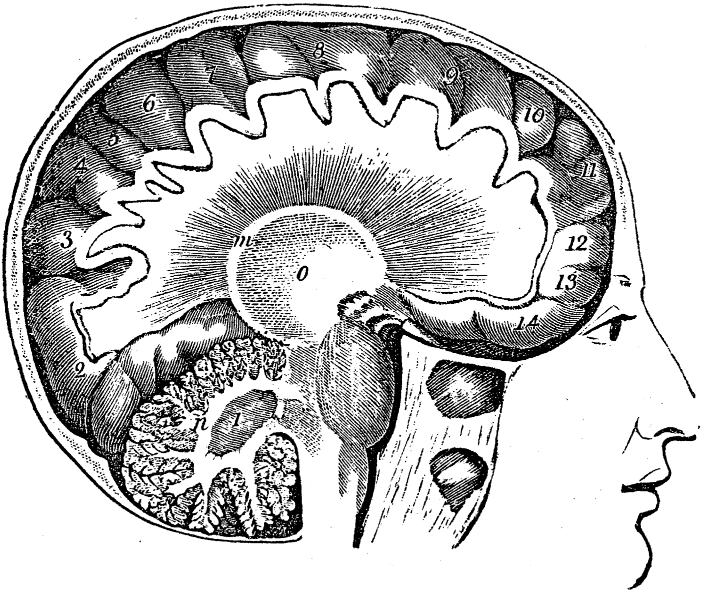
c, Internal structure of the convolutions.

●, Fibres of the convolutions aggultinated by a very delicate neurilema.

This engraving represents the right hemisphere of the brain, in which the convolutions are cut away to the depth of about three quarters of an inch, to show the fibres radiating from the centre of the outer surface of the great inferior ganglion into the convolutions.

The white spot in the centre of the figure represents the outer surface of the great interior ganglion, over which the fibres are drawn with great accuracy from the original.

VERTICAL SECTION OF THE BRAIN



A fine view of a vertical section of the brain through the convolutions, the white substance, the great inferior ganglion, and the cerebellum.

This section is made through the ganglion to the depth of about the quarter of an inch from its outer surface, and through the middle of the cerebellar ganglion.

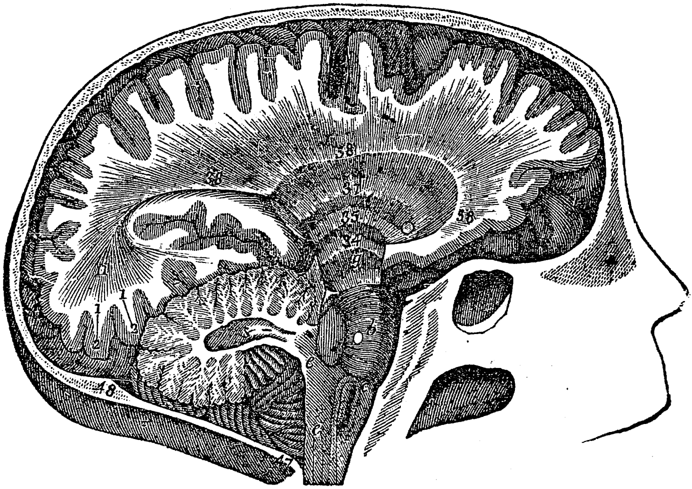
o, Great inferior ganglion.
m, Fibres radiating from the surface of the ganglion.
1, Cerebellar ganglion (corpus dentatum).
n, Arbor vitæ.

Some of the principal organs formed by the convolutions of the brain are numbered thus.

1, Amativeness, or sexual love.
2, Philoprogenitiveness, or love of offspring.
3, Inhabitiveness, or attachment to home.
4, Concentrativeness, or power of mental concentration
5, Approbativeness, or love of approbation.
6, Self esteem.

7, Firmness
8, Reverence.
9, Benevolence
10, Imitation.
11, Comparison, or power of comparing one thing with another,
12 Eventuality, or power of observing action.
13, Individuality, or power of observing existence.
14, Language, or power of learning or using verbal signs

PERPENDICULAR SECTION OF THE BRAIN.



The fibres of the white or medullary substance radiate, as seen in the figure, from the base of the brain into the convolutions, the folds of which are plunged into the white substance, generally from a line to an inch deep.

e e, is a section of one of the *corpora restiforma.*
c, Is a section of one of the *corpora pyramidalia.*
b, Is the *pons Varolii.*
g, Is one of the *crura* of the brain.
s Is the cerebellar ganglion, surrounded by the arbor vitæ.

34, 35, 37, 38, and 11, Are the cerebral fibres, which, originating in the *medulla oblongata*, pass under the *pons Varolii*, through the *crura*, and *corpora striata*, and great *inferior ganglions*, and ultimately expand into the convolutions of the brain.

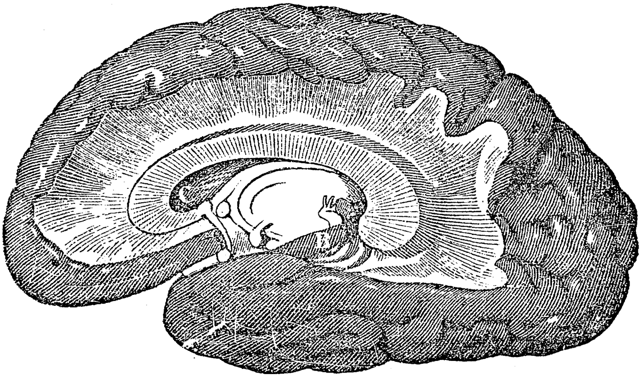
47. 48, Situation of the cerebellum within the skull.

These crura contain cineriterous matter in their interior, from which additional fibres are continually *sent off as they advance to join and strengthen those that have come from below.*

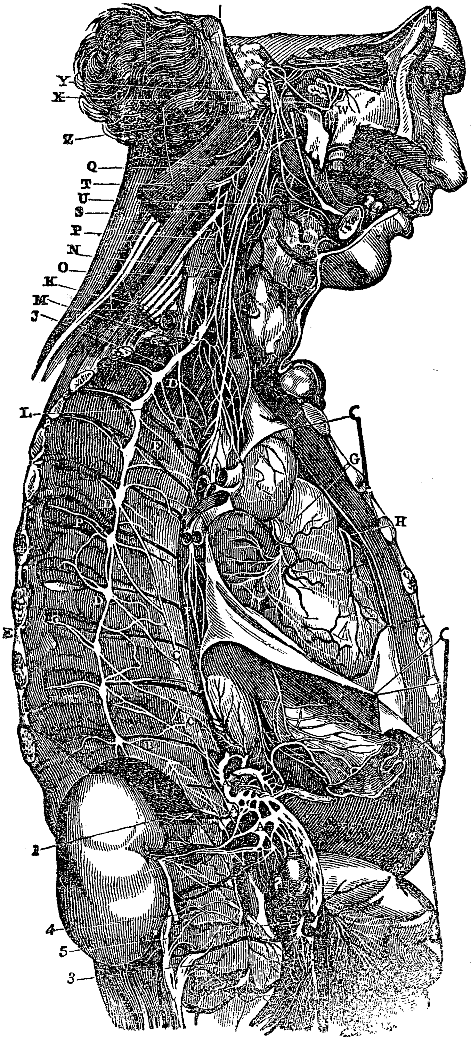
The cerebral crura are besides divided into two parts, viz.: an anterior and external, and a posterior and internal mass, the limits of which are marked by two superficial furrows. They are the roots of the primary bundles of fibres of the brain, which *diverge* as they advance to form the immense mass of the hemispheres.

A great portion of these fibres pass to and through the ganglions in their course to the convolutions, from which another set of fibres *converge* through the white substance, and corpus callosum to the same ganglions in the centre of the brain.

RIGHT HEMISPHERE OF THE BRAIN.



A, Front part of the right hemisphere of the brain.
B, Great inferior ganglion.
C, Great superior ganglion.



GANGLIONIC SYSTEM OF VEGETABLE LIFE.

GANGLIONIC SYSTEM OF VEGETATIVE LIFE.

A view of the ganglions of the organs of the body, and other structures, connected with the great sympathetic nerve, reduced from Manec's grand plate, by John Harrison Curtis, Esq., London.

AAAA, Semilunar ganglion and solar plexus. The ganglion is placed upon the base of the two pillars of the diaphragm, one being on each side, and the right generally larger than the left.

B, Small splanchnic nerve. Consists in the union of two or three twigs, furnished by the last thoracic ganglia.

C, Great splanchnic nerve. Formed by the junction of three, four, five, or eight twigs, coming from as many thoracic ganglia.

DDD, Thoracic ganglia. Ten or eleven in number, corresponding with the posterior part of the lateral side of the body of the dorsal vertebræ; most of them rest on the head of the ribs; others correspond with the level of the intercostal space.

E, Internal branches. All of them are attached upon the body of the vertebræ, and advance, ramifying and communicating with each other, toward the medium line, where they are distributed over the œsophagus and the aorta.

F, External branches. Two for each ganglion, very different from each other; one large, red, pulpous, and going to the intercostal nerve; the other much smaller, white, giving off no twigs, and passing from the intercostal to the ganglion.

G, Right coronary plexus. Passes between the pulmonary artery and the aorta, and accompanies the anterior coronary artery.

H, Left coronary plexus. Passes before the left branch of the pulmonary artery, goes to the posterior side of the heart, and accompanies the left coronary artery.

I, Inferior cervical ganglion. Placed behind the vertebral artery.

J, Inferior twigs. Commonly a single branch communicating with the first thoracic ganglion.

K, External threads. Very slender, and communicating with the last cervical and the last two dorsal pairs; some filaments pass round the subclavian artery.

L, Internal twigs. Very minute, and distributed to the longus colli, upon the anterior part of the spine; some of them descend to the pulmonary plexus.

M, Anterior threads. Two or three in number, constituting the inferior cardiac nerves.

N, Middle cervical ganglion, Placed on a level with the body of the fifth or sixth cervical vertebræ, and covered by the internal jugular vein.

O, Interior twigs. Three or four in number, all passing over the inferior cervical ganglion.

P, External twigs. Vary much in number, and give off ramifications communicating with the cervical pairs and the phrenic nerve.

Q, Superior cervical ganglion, Situated on the anterior and lateral part of the second, third, and fourth cervical vertebræ.

R, Superior branches. Two in number, and placed behind the internal carotid artery.

S, Inferior branch. Rarely double, and descends upon the great rectus muscle as far as the middle cervical ganglion.

T, External branches. Their number very variable; they communicate with the first, second, and third cervical pair.

U, Submaxillary ganglion. Situated upon the internal side of the submaxillary gland, a little below the styloglossal muscle.

V, Vidian nerve. A branch springing from the posterior side of the spheno-palatine ganglion.

W, Naso-palatine branch One of the internal branches of the spheno-palatine ganglion, entering the nasal fossæ by the spheno-palatine foramen.

X, Spheno-palatine ganglion. Placed in the summit of the zygomatic fossa.

Y, Opthalmic ganglion. Situated in the orbit, and occupies the external side of the optic nerve.

Z, Auditory nerve and membrane of the tympanum, containing, within its cavity, four small bones, viz. the stapes, the incus, the malleus, and the os orbiculare.

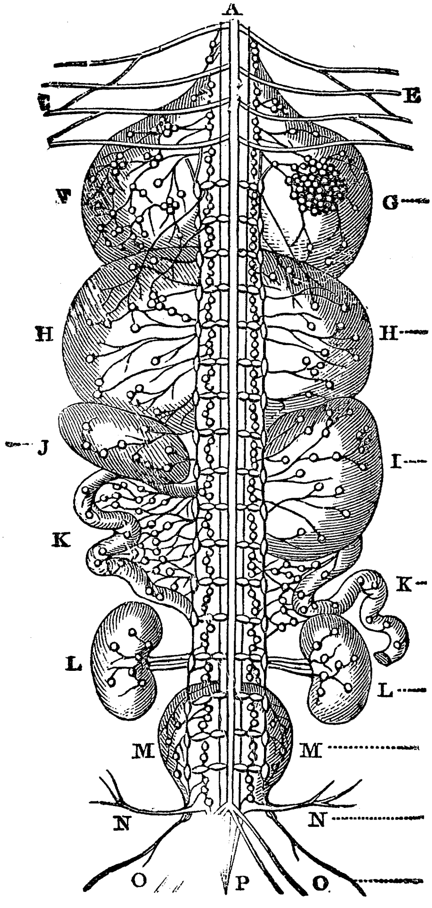
1, Renal plexuses. Furnished by threads coming from the solar and cœliac plexuses, and from the last dorsal ganglion, the first lumbar, and the small splanchnic nerve.

22, Lumbar ganglia. Commonly four or five; the first corresponds with the body of the first lumbar vertebræ, the last with the fifth.

3, Internal branches. Numerous; go downward and inward, to the aorta, where they are lost in the aortic plexus.

4, External branches. Two of these, at least, arise from each ganglion; they follow a course more or less flexuous toward the anterior branches of the lumbar nerves.

5, Aortic plexus. Formed by threads from the solar plexus, superior mesenteric, renal, small splanchnic nerve and internal branches of the lumbar ganglia.



A, Spinal cord.
EE, Spinal nerves connected with the right and left arms.
FG, Lungs. HH, Stomach. I, Liver. J, Spleen.
K, Small intestines and mesentery. L, Kidneys. **MM Uterus**
NN, Spinal nerves connected with the sacrum.
OPO, Spinal nerves distributed to the lower limbs

occupies the greater part of the cranium, or skull, is called the CEREBRUM. The smaller portion is situated in the hinder part of the head, just above the spinal marrow, and is called the CEREBELLUM—a word meaning "the little brain." The cerebrum is laterally divided into halves, called *hemispheres*, and also into smaller divisions, called *lobes*. The interior portion is made up of various cavities, and delicately-arranged *minute fibres*, which commence in extremely minute bodies, called *cortical glands*, which every where occupy the surface of the Cerebrum; some of these fibres afterwards converge to form the spinal marrow. The surface of the cerebrum is also every where disposed in wavy furrows, not unlike the folds of the intestines. But the cerebellum, not only differs in size and situation, but also, in exterior and interior form; for the exterior, instead of the wavy folds, is arranged in what are called *lamina*, or plates; and the interior has an arborescent or tree-like appearance—so much so, that it is called arbor vitæ, the tree of life. Now, viewing man as formed according to the Infinite Wisdom and perfect order of a Divine Creator, we must expect to find consummate order and design within him, and that every organ of his body should be formed for some specific and determinate *Use;* for USE is the great end of all the Creator's operations. Hence we may conclude that each of these brains has its own specific use, and such we find to be the case; and I will endeavor to point out such of those uses as bear upon the subject we are now considering—my object at present being, not to present you with a full view of the physiology of the human brain, but only so much as is indispensably necessary to be known in order to comprehend the phenomena of Mesmerism.

14. On the base, or lower part of the cerebrum, are found various nerves, which may be easily seen in any good anatomical engraving. Thus in front are found the bulbs of the olfactory nerves, or nerves of smell, which, to use a familiar phrase, *grow out* of the base of the cerebrum, and expand towards the forehead, and from these bulbs a multitude of filaments depend, which are spread out on the delicate membrane in the upper part of the nose. The optic nerves, or nerves of sight, also issue from the under part of the cerebrum, then approach each other and form a union, called the commissure; they then separate, and proceed in the form of a round white cord to the ball of each eye, which they enter behind, and then spread out to form the delicate nervous expansion called the retina. The nerves which *move* the eyes and eyelids, also issue from the base of the cerebrum. There are also other nerves arising from different portions of the cerebrum; but except those by which sensation is experienced, they have no particular reference to the phenomena of Mesmerism. There are other important nerves which arise within the cranium, but not from the cerebrum, and in respect to mesmeric phenomena, the chief are the seventh and eighth pairs, which arise from the cerebellum, and the great sympathetic nerves, which, by means of the eighth pair of nerves, are also connected with the lesser brain. It is also worthy of notice, that *all* the nerves of the cerebrum issue from its *base*, thus leaving the fibrous and cortical portions free; and by this means the General Sensorium is placed in a re-

gion above the ministering nerves, and thus, as it were, *midway* between the mind and outward nature.

15. Now it is essentially necessary to be known, in order to form any correct idea of the physiological phenomena of Mesmerism, that all the nerves of the body, innumerable as they may appear to be, arise either *directly* or *indirectly* from the cerebrum or cerebellum; but in speaking of the *origin* of the nerves, my remarks have no reference to *their development* in the embryo, but to their situation and *use* in the perfect organism. And also, that whatever may be the *parental character*, so to speak, of any nerve, that character it preserves to its termination, however circuitous its course may be, and however its filament may be mixed up with filaments of nerves of another order, so as to form a *compound nerve*. This is one of those traits of Divine simplicity which are so manifest in the Animal Economy. Now all the nerves by which we *feel* or *act*—that is, all what are called the voluntary and sensory nerves, may be said to arise, either *directly* from this larger portion of the entire brain, called the cerebrum, or *indirectly* from it, by means of the *spinal marrow*—which may be considered as *a continuation of the cerebrum in the body*. The SPINAL MARROW is composed of three distinct columns—the anterior, or front column, being formed of what are styled *motor nerves;* that is, nerves that are concerned in voluntary motion. The posterior column, or hinder part, of *nerves of sensation;* and the middle part of the column contains the roots of the *nerves of respiration*. If the brain is attentively examined, portions of nervous fibres may be seen passing by and

through other nervous portions, and yet having no connection with them. Thus, portions of the motor fibres of the cerebrum, may be traced under the arch of the optic nerves, and through that appendage of the cerebellum called the Bridge of Varolius; and yet they are uninfluenced by the cerebellum, but preserve their cerebral character, and pass intact and directly into the *fore part* of the spinal marrow; and portions of *sensory fibres* may be traced in the same manner going by and through nervous substances of another character without losing their own specific character, and then passing into the *hinder* part of the spinal column. Now it is by this mode of arrangement, that the true character of the nerves at their origin is preserved to their extremities; and so carefully is this distinction preserved, that even if filaments of *motor* or *sensory* nerves appear to be united in one cord, yet each order of filaments retains its original character. If I raise my arm, I do so by muscular power, communicated by nerves having their true origin in the cerebrum; the same may be said of walking, or of any other action under the control of the will. All these voluntary and external actions, are done by and through the medium of the cerebrum. Thus one great use of the cerebrum, is to originate and control the *voluntary* and *sensory* nerves; it is thus the soul's medium for external knowledge and voluntary action—the great organ of what is called *Animal Life.* Hence pressure on the cerebrum, by paralyzing its action, instantly suspends all sensation and capability of motion.

16. But the office of the CEREBELLUM, the smaller, and curiously organized portion of the entire brain is

of another kind. This is the great organ or fountain of organic life; that is, of the life of the internal organs of the body, and of the *involuntary* motions: the pulsations of the heart; the circulation of the blood; the digestive actions of the stomach and bowels; the action of the reproductive organs; in a word, of the thousand functions performing *within us*, and over which our will has no control. All these *internal* functions are under the direction and control of nerves proceeding directly or indirectly from the cerebellum or its appendages; and this chiefly, by the aid of the great sympathetic nerves, and the eighth pair already alluded to.

17. The eighth pair of cranial nerves, called also the par vagum, arises from the cerebellum, and its connections, and gives off numerous branches which ramify plentifully on the stomach and lungs, and in fact are continued to nearly all the viscera. The *great sympathetic nerves* differ from all the other nerves in the body, both in their arrangement and form: they are studded with small kernels called *ganglia*, or knots, into which, and out of which, numberless nervous twigs have their entrance and exit; and in the neck, by some of these branches they are connected with the par vagum, and thus with the cerebellum. These two pairs of important nerves may be considered as forming *the trunk of the system of the cerebellum*, just as the spinal marrow forms the trunk of the system of the cerebrum. And to perfect the operation of the animal economy, twigs from each are united with each other; and from the great sympathetic with all the nerves of the body. Now the existence, and *dis-*

tinct functions of these two brains, and the systems of nerves depending on them, must be carefully remembered, if we would understand the phenomena of Somnolism, or ordinary Mesmerism. And to enable you to comprehend the *physiology* of this wonderful discovery, I will, as the first step, point out the principal difference between a state of wakefulness and sleep, and the immediate *physical* cause of this difference.

18. During wakefulness, both brains are more or less in a state of activity; but of the action of the larger portion—that is of the cerebrum—we are conscious, so that *our will* bears rule in the animal economy, and the sensory nerves convey to the sensorium within the cerebrum, the various impressions made by outward objects. But when sleep seals up the eyelids the activity of the cerebrum ceases, and hence we become insensible to outward things; and then nature, or the involuntary portion of our nervous centre—that is *the Cerebellum*, with its derivatives—has the entire control and direction of the animal kingdom. It is well known that "balmy sleep" is "tired nature's kind restorer," but it is not so generally known, that one great reason for the refreshing and restorative nature of sleep consists in the complete suspension of the faculties of the cerebrum, and the operations of nature being carried on by the cerebellum, without any of those manifold disturbing causes which arise from our voluntary and conscious activities. The cerebrum is composed, as I have already observed, of innumerable fibres, originating in little lobules or glands. In the *active* state of this portion of the entire brain, or in other words, in the *wakeful* state, these fibres are *erect*.

and, with their lobules or glands, point towards the circumference of the cranium, and there is a capability of moving them either *singly*, or in *greater* or *lesser groups;* and hence arises the power of the will to exercise such an immense variety of muscular actions, and the rapidity and delicacy with which the behests of the will are transmitted by the nerves. In a state of inactivity or sleep, the fibres collapse, or fall together, and hence the capability of this individual action ceases, and a more general or combined action only remains possible. This *general* or *combined* action is similar to the true natural action of the cerebellum, which, from its peculiar organization, is incapable of the *individual* action which distinguishes the cerebrum. But with the cessation of *individual* or separate action in the cerebrum, all ordinary sensation ceases; and hence the unconsciousness of a state of sound sleep.

19. Another physical cause for the state of insensibility in sleep is, that by the collapse, or falling together of the fibres of the cerebrum, the blood is prevented from entering the finer channels of the brain, but courses along the *pia mater*, or membrane investing the brain. This is occasioned by a law generally overlooked, namely, *that the brain has an automatic movement of its own*, synchronous, not with the action of the heart, but with the respiration of the lungs; and on this account the brain has the control of the blood circulating within its substance, independant of the action of the heart. Hence the vertebral and carotid arteries which supply the blood to the brain, have a peculiar erratic course, more so than any other

arterial trunks; and every mechanical precaution is taken to impede the propulsive force of the heart, so that the brain may imbibe or reject the vital and stimulating fluid just according to the state induced upon it. Whatever, therefore, induces a change in the state of the fibres and cortical glands of the cerebrum, changes the state of its automatic action, and thence produces either somnolency or wakefulness.

20. Now let us apply these anatomical and physiological facts to the illustration of mesmeric phenomena, and I think we shall be able to understand something of the mode by which they are produced, that we shall find ourselves in possession of the *true key* to unlock these generally considered mysteries. But first I will briefly describe the most usual manifestations.

21. The simplest *visible* state is that called mesmeric sleep. This I have induced both by the ordinary method, and also by Dr. Braid's mode of making the patient steadfastly gaze upon some small fixed object, called by him Hypnotizing; but I consider the mesmeric mode the best way, where the patient is susceptible of its influence, and by it, and, as far as my present experience goes, by it only, can the *higher* developments be produced. Whatever the mode of operating employed, the primary effect is on the *state of the cerebrum*, which, by modifying the circulation of its blood, collapses in various degrees, and thus assumes the somnolent state. But in using the ordinary mesmeric mode, I altogether discard those formal and mystic modes of proceeding sometimes practised and recommended by some writers on Animal Magnetism. I have reason to believe, as I shall point out in the

sequel, that *mind* is the grand agent in all really mesmeric phenomena, and the manipulations are merely so many means of fixing mental action. My usual mode of proceeding is simply to place the subjects or patients in a sitting posture, and take both their hands in my left hand, and then place my right hand on their head. Where there is any degree of mesmeric sensibility, this is the best and most gentle mode of proceeding; but in more difficult cases, the desired effect may be sooner produced by gentle passes, made from the crown of the head over the forehead downwards, or, in some cases, by making the passes over the entire head *backwards*. In this simple mesmeric sleep, just as in ordinary sleep, we find different degrees of soundness. Some persons merely feel a little drowsiness; others find it impossible to open the eyelids, and yet are perfectly conscious, and, in other respects, awake. Other persons of greater susceptibility, either the result of continued experiment, or peculiar nervous temperament, proceed quickly into a sound sleep, or, as I propose to call it, SOMNOLISM. This state may quickly pass into one having all the characteristics of *somnambulism*, or what is commonly called sleep-walking; in fact, I can see no difference between this state and natural somnambulism, except that the latter is the result of spontaneous natural causes, while the former is the direct result of human agency. I have also reason to believe that natural somnambulists will make the best mesmeric subjects.

22. The induction of the true somnolent state, is all that is required to produce the curious and manifold phenomena of mesmerism, save and except the higher

stages of cerebral lucidity and clairvoyance. Some of these states I will now proceed to notice; and, first, INSENSIBILITY TO LIGHT AND PAIN. If the eye of a patient in the somnolent state is examined, it will be generally found drawn *upwards* and *inwards*, and this, perhaps, in proportion to the complete development of the state; but it will exhibit little, if any, susceptibility to the influence of light. In fact, I have satisfied myself, by repeated and careful observation, that all external vision is withdrawn. There is the perfect visual organ, but the party sees not. There is also the healthy skin, with its infinitude of nervous papillæ, but it exhibits no sign of feeling. The most sensitive parts may be pinched, or pricked with needles or pins, but the patient will exhibit no consciousness of suffering, or, in fact, of any kind of feeling, but will continue to converse with the mesmeriser or the experimenter without noticing in the least degree the apparently painful experiment to which he is being subjected. Nay, more, it is an undoubted fact, that the most severe surgical operations have been performed, both in this country and on the continent, without the patient evincing any susceptibility. I will mention one only, recorded in the French medical journals, and also in the *Penny Cyclopædia*, under the article Somnambulism. An elderly French lady was the subject of cancer in the breast. Her physician was a practiser of mesmerism, and he had frequently employed that agency, in conjunction with other means, to abate, and, if possible, cure that dreadful malady. But he found that although he could always allay pain, and put the lady into a state of complete ease by mesmerising her, yet the disease continued its ravages, and the only hope was in an operation—that is, by amputating the breast. When this only alternative was proposed to her in the wakeful or normal state, it produced the most intense anguish and apprehension; but in the abnormal mesmeric state, she would calmly discuss the matter with her physician and friends. At last the operation was determined on, and Jules Colquet, the eminent Parisian surgeon, was chosen for the operator. The surgeon, in his narrative of the case, says that he found the lady seated in a chair, her eyes closed as if in sleep, yet conversing with her physician, who had, in fact, put her into the mesmeric or somnolent state some short time before. She spoke calmly of the intended proceedings, removed her own dress to expose her bosom to the surgeon's knife, and during the operation, which lasted about a quarter of an hour, she conversed cheerfully both with the surgeon and physician who was seated by her, and supported the arm on the diseased side, without exhibiting the slightest pain or consciousness of what was going on. The lady was then put to bed and carefully attended to, without being awaked from the mesmeric state. On the next day but one the first dressings were removed—usually a most painful trial to the patient—the wound dressed again, and then, after the lapse of some hours, she was aroused, having been kept for more than two days in the somnolent state. When awakened she was unconscious of all that had transpired since she was put into the sleep, more than two days before! When she found that her breast had been removed, that the wound had again been dressed, and found herself surrounded by anxious and sympathising relatives, her feelings may be better imagined than described! But I will here make a cautionary remark. It must not be supposed that because persons in a state of somnolency feel no pain, that, therefore, they will be unconscious of any injury inflicted on them in that state when they return to the normal condition; on the contrary, when they are aroused they will feel the effect of any injury just in proportion to its severity. Common humanity therefore requires, that *experiments* made to ascertain the state of the sensibility, should be such as only to occasion transient pain.

23. CATALEPSY, or rigidity of the muscles; PHANTASY; TRANSFER OF FEELING from the operator to the patient; and what is called MAGNETIC ATTRACTION.—These are all interesting displays of mesmeric, or rather *psychic* states, and will be better understood when we come to the consideration of the psychological part of our subject. The facility with which these states can be produced depends entirely on the susceptibility of the subject. In the majority of cases, manipulations, actual contact, or audibly spoken words are necessary to produce the desired result; but in some cases the mere volition of the operator is sufficient. Thus in case of catalepsy, by merely drawing the hand over the patient's arm, that is, in mesmeric language, *making passes* from the shoulder towards the tips of the fingers, the muscles of the arms may be rendered perfectly rigid, so that by no effort of the patient could they be put down, nor could a stranger render them flexible; by the application of great force the shoulder joint may be moved, but as soon as the pressure is removed

the arm will instantly resume the position in which it had been placed by the operator. If the hand of a person of about the same physical strength as the mesmerised subject is placed in the hand of the subject. and the fingers made to clasp it, it will be found almost impossible to withdraw it, so tight will be the grasp; and yet, notwithstanding this great apparent exertion of muscular power, the mesmerised subjects will continue to converse on various topics, and evince neither mental nor physical consciousness of the power they are displaying! This peculiar characteristic of the somnolent state can be most beneficially employed as a curative agent in the restoration to strength of palsied or weakened limbs, provided the somnolent state can be induced on the diseased person.

24. But the phenomena above alluded to are among the simplest of these displays. By a single touch the mouth of the patient may be closed, so instantaneously, as to leave a word half pronounced; and by a single *pass*, as speedily set at liberty. Even the nostrils may, by a single pinch, be partially closed, so as instantly to produce the *nasal twang* common upon stoppage of the nasal passages by cold or otherwise; and then as quickly, by a wave of the hand, be restored to perfect freedom. Some patients, while putting themselves into various postures, may be instantly rendered immovable and statue-like in any posture. If a rod, or any other suitable article, be put into the hand, and the hand closed by the operator, by no effort can the patient let it go, although he may be so far demesmerised as to be fully conscious of his state and of all around him. On the other hand, by a mere pass of the hand of the mes-

meriser, or it may be, by a motion of his *will*, the mesmerised party finds it equally impossible to retain his hold. By a single pass or pressure, an individual may be rooted, as it were, by his feet to the floor, fixed immovable in his chair, or his hands fixed firmly to a wall or bench, or any other object. Some of these experiments are highly interesting and amusing, but the most wonderful, and apparently inexplicable, are but varied manifestations of the simplest forms of catalepsy and are, as we shall see, explainable by the same simple law which also explains other phenomena.

25. PHANTASY.—By this is meant such an action on the mind of the mesmerised party, that the mere suggestions of the mesmeriser—sometimes not audibly expressed, but merely silently willed—are taken for realities. Thus a handkerchief may be thrown into the lap and silently willed to be a rabbit, a guinea-pig, a child, or even any disagreeable object, as a snake, or other reptile; and upon directing the attention to the object, as by simply asking "What have you got in your lap?" the action and language soon evince that it is considered to be just the object the operator *wills* it to be; nor can the subject conceive it to be anything else, or divest himself of the Phantasy. The effects of this mere *imaginative action* will generally be more strikingly displayed by touching such of the phrenological organs as have an affinity with the sentiment or feeling intended to be produced. Thus philoprogenitiveness and benevolence, in case an infant or an inoffensive animal is suggested; and cautiousness, in suggesting the idea of a snake, or other disagreeable objects. Again, an empty glass may be offered, and

by stating it to contain strong hot brandy and water, the same coughing and difficulty of swallowing will be produced as would follow the attempt to swallow such a liquid by a child, or a person wholly unaccustomed to it. Then, by taking the glass away and immediately presenting it again, saying that it contains cold water, but care must be taken lest it cause toothache, immediately all the effects of an intense cold draught will be manifested. Once a mesmeric subject asked me for a particular drink; I presented an empty glass and silently willed it to be castor oil. No sooner had the glass touched the lips than it was dashed away and broken to atoms, at the same time the party exclaiming, " Ah, it's so nasty!" Many more striking and interesting experiments may be exhibited, but they may be all referred to the same primary causes.

26. Transfer of State.—By this is meant that remarkable phenomena exhibited by good mesmeric subjects, in feeling whatever may be done to the mesmeriser as done to themselves. This I have witnessed so often, and under such a variety of circumstances as to admit of no doubt as to its correctness. Thus, on one occasion, while lecturing, one of the audience, to test the matter, came unawares and pricked my leg. I looked round for a moment with surprise and some little indignation, but by the time I comprehended the motive of the seeming offender, the mesmerised subject felt it, and screamed out loudly " that some one had pricked her leg," and pointing at the same time to the corresponding portion on her own leg which had been pricked in mine. At the same time a pin might have been thrust *really* into her leg without her evincing

any consciousness. I have got individuals to tread on my toes, pull my hair, or pinch different parts of the body, and I have invariably found that with this subject not many seconds would elapse before she would complain of exactly similar treatment, and refer the pain to the exact corresponding part; and sometimes I have experienced considerable difficulty in dispelling the illusion. These undoubted facts shed much light on what may be called the highly spiritualized, or purely mental origin of some diseases, and will afford some clue to the *apparently* miraculous manner in which some peculiar diseases have been removed.

27. PHRENO-MESMERISM.—This is the name usually applied to the manifestation of the phrenological sentiments and feelings of a mesmeric subject. It has been considered as affording a triumph to the materializing class of phrenologists, and hence has been decried and attempted to be set aside by the metaphysical spiritualists. Possibly both classes of reasoners may be wrong. Certainly the mere placing of the finger of the operator on any part of the head, and it being followed by the manifestation of a sentiment or feeling proper to the organ said to be situated in the part touched, is no proof that such organ is really there; because the *idea* of the feeling or sentiment is in the operator's mind, and the fact may be accounted for by mesmeric imaginative action and the transfer of feelings. Again, anatomy reveals nothing within the cranium analogous to the arbitrary divisions marked on phrenological busts. Besides, when we touch the head, the skull prevents us acting directly on the brain; we only

excite the extremities of those cranial nerves which ramify in the scalp. On the other hand, the opportunities I have had for acquiring experience enables me positively to assert, that contact with at least certain parts of the head will produce those feelings phrenologically ascribed to those particular portions. Thus, for example, I have seen *alimentiveness* powerfully excited in a mesmerised subject who, when left alone for a little while, accidentally reclined, so that a portion of the head where "alimentiveness" is situated was brought into contact with the edge of a table. Again, I have seen philoprogenitiveness excited by a subject accidentally rubbing the occipital portion of the head against a high-backed chair—not to mention other instances. But this apparent proof of the material view of the question is not the whole one; for I have seen some of the phrenological sentiments excited without touching the head! Thus, upon simply taking the hand and silently thinking reverently of the Deity, the mesmerised subject has fallen down on the knees and manifested the most profound veneration. On other occasions, when more than one subject had been mesmerised, on touching the "organs" on the head of one, the other, without any touch or connection, or any knowledge of any action, would instantly manifest the sentiment. Upon the whole, I think the real evidence afforded by mesmerism is favorable to phrenology; but I am far from thinking that the evidence *properly interpreted* necessarily leads to that sort of materialism which is, by many persons, associated with phrenological doctrines. The brain is undoubtedly the mind's organ;

this position remains, whether we suppose the mind uses the whole brain in every mental action or only an appropriate part.

28. It has been said that phreno-mesmerism is the result of electrical action, and that, in fact, all mesmeric action is but an electrical phenomena—the operator being *positively* electrified, the patient *negatively* so. For this, I believe, there is no evidence whatever. It is true that electricity may be made to *stimulate* certain vital actions, but it is admitted by the best physiologists that there is no *identity* between them. I have carefully experimented, and cannot find that there is any perceptible difference between the electrical and magnetic state of the mesmerised subject and that of the operator, where, according to electrical theory, the greatest difference ought to be manifested. Whatever *name* or *cause* may be assigned to mesmeric agency it is undoubtedly a vital one. It is true, as I observed at the outset, that within the living organism are collated all the powers of the universe; but they are in the organism in its own peculiar manner. The magnetism and chemistry, the attractions and repulsions, and the other internal operations of the body, are *not* the magnetism and chemistry, the attractions and repulsions of outward nature; but they are *living actions*, analogous to outward cosmical and terrestrial activities, but perfectly distinct from them, and existing in a degree altogether above them. They are, in fact, the antitypes of which the types are found in outward nature.

29. With the exception of **CEREBRAL LUCIDITY**, magnetic vision, as it is sometimes called, and **CLAIR-**

VOYANCE, the foregoing classification may be made to embrace all ordinary mesmeric or somnolent phenomena; lucid and clairvoyant manifestations are so evidently of a psychical nature, that before noticing them, let us apply ourselves to the solution of the *physiology* of the states we have briefly described.

30. We have seen that within the skull there are, in reality, two distinct brains, although popularly called the brain; that there are two distinct systems of nerves connected with these two brains; that by the larger brain, or cerebrum, and its nerves, we feel, think, and act; and that it is thus the soul's medium of conscious intercourse with the external world. That by the cerebellum, or little brain and its nerves, are directed and controlled all the involuntary and vegetative functions of our bodies; that the brain has an automatic, or in other words, an independent action of its own, by which it has the control of the blood circulating within it, and that in the state of sleep the fibres of the cerebrum collapse or fall together, and the blood is prevented entering the finer channels and thereby stimulating the brain to activity, and that from this state of collapse and altered circulation of the blood arises the unconsciousness and insensibility of profound sleep.

31. The true mesmeric action is, as will be presently shown, primarily and fundamentally of a *psychological* character, but it induces a peculiar *physiological* state. The direct effect of the passes, or whatever means are employed, is to produce a somnolent state of the brain, in some respects resembling common sleep, but in others widely differing from it. When the true

mesmeric, or rather psychical, relation between the operator and his subject is established, *the cerebrum of the latter is rendered dormant*, the cerebellum and its dependencies alone preserving their normal state. In the first place *all* consciousness appears to be suspended, but by degrees an *inner consciousness*, similar to the consciousness of dreaming is awakened, and from this inner consciousness the somnolized person speaks and acts. The optic nerves and the other nerves of the eye belong to the cerebrum, hence one of the first *visible* effects of mesmeric influence is an inability to open the eyelids, although the eyeball may be as yet uninfluenced; but as the somnolent state continues, the optic nerves, or nerves of sight contract, and the ball of the eye rolls upwards, and all power and perception of vision is withdrawn. Then, as observed, with the increase of the somnolency the fountain-head of all the other sensory nerves becomes dormant, and that of the motory too, in a partial degree. The *sensorium* being by this *change in the internal state of the cerebrum* removed from its connection with the external world, all sense of pain is of course absent; and hence the seeming mysterious phenomenon of a person conversing with another and yet being unconscious of feeling, is at once solved by a knowledge of the simple fact, that the *state of the cerebrum* is changed by the somnolent influence, and an *inner consciousness* awakened.

32. Another physiological state, arising also primarily from a psychological cause, is now perceptible; for although the operator and his subject or subjects are of course two or more persons, yet, in respect to *cerebral* action, or more distinctly, in respect to the

action of the cerebrum, *they are* ONE. In each person the *cerebellum* and its system of nerves is in the normal condition, but there is only *one* normal and active *cerebrum*, namely, that of the mesmeriser or operator. Hence, however many may be the subjects, if they have all been mesmerised by the same operator, and are all fully susceptible of the somnolent influence, they are all so intimately, interiorly blended with him, that the absence of their own external cerebral consciousness causes them to feel his cerebral consciousness as their own. Here then we discover the *physiological* reason for the strange and anomalous states exhibited. Thus, in cases of phantasy, the idea existing externally in the cerebrum of the mesmeriser is, when willed by him, perceived by the subject as if existing in his or her cerebrum. So also in cases of catalepsy, the somnolency of the subject's cerebrum permits those muscles which are influenced by the voluntary nerves to be actuated by the will of the operator's cerebrum. Hence, in the best cases, the silent operation of the mesmeriser's will, that is, of the power of his cerebrum, is sufficient to throw the subject into a state of statue-like rigidity; but generally it requires the aid of *passes*, which determine more efficaciously the downward nervous currents. Hence, also, any pain inflicted on the operator, which, of course, he feels in the sensorium connected with the origin of the sensory nerves, is felt as if the impression was made on the cerebrum of the subject.

33. But we shall generally find that although sight and feeling are withdrawn the subject retains a perfect capability of HEARING. He may sometimes be so indrawn as to evince no perception of sound, similar, in

this respect, to a person engaged in deep thought; but by patiently persevering until the attention is excited, or the *desire* of the operator is felt, we shall generally be able to demonstrate that the sense of hearing remains. Yet by no means can *sight* and *feeling* be restored except by partially or wholly demesmerising the subject. This fact may be thought to militate against the theory of cerebral action I am endeavoring to inculcate, but it in reality tends to confirm it—for the nerve of hearing, which is a portion of the seventh pair of cranial nerves, has its roots in what is called the *corpora restiformia*, which is directly connected with the *cerebellum*. Sight is solely under the direction of the cerebrum, and we can exert that faculty or not at our pleasure, but we cannot help hearing if we are within the influence of sound, that is, by no organism connected with our ears can we shut out sound. The ears of a person in deep sleep are still open to the modulations of the air, on which sound depends; but the dormant state of the cerebrum prevents the conscious perception of sound, unless it is so loud as to produce that state of partial wakefulness on which dreaming depends; and the mesmerised party is conscious of sound, because, as we have already observed, the state of inner consciousness is in some respects analogous to the state of dreaming. But hearing is not so entirely dependent on the cerebellum as the *internal* involuntary functions, but is somewhat of a mixed nature, like the functions of respiration.

34. Here then is the *whole physiology* of the mesmeric or somnolent state, and *the reason* for the seeming mystery and contrariety to our *usual* feelings and

common experience. The cerebrum of the subject is *dormant*, the cerebellum continues its normal state of activity, while, from the peculiar relationship of the parties, to which we shall presently allude, the cerebrum of the operator dominates over his subject, and is, in a degree, the common cerebrum of both parties.

PHILOSOPHY AND PSYCHOLOGY OF MESMERISM.

35. Clairvoyance.—Of all the extraordinary phenomena of mesmerism, none appear to stagger the general belief more than the different manifestations of clairvoyance or magnetic vision, or to speak more truly and plainly, the internal sight of the soul. To say that a person can see without the aid of the eye, or by any other means than light entering into the pupil of the eye in the usual manner, seems like uttering an absurdity, or declaring the possibility of an impossibility. Yet, strange as it may sound to those who have had no experience in this matter, there is no mesmeric phenomena more capable of *positive proof*, provided the necessary care be taken in making the experiment, and the subject be placed in proper circumstances; and I trust this evening to afford you ocular demonstration of the fact.

36. But before proceeding further, I wish that it may be distinctly impressed upon you, that when we carefully examine the eye and the brain, we shall see

reason to acknowledge that an internal function of sight, although remarkable and unexpected, and generally unknown, is not more difficult to explain than ordinary vision when thoroughly examined. On referring to the human eye, or any correct representation of it, we shall find that it is a hollow ball, filled with three different kinds of fluids arranged in a determinate order. In front is a horny transparent lens, something like a small watch-glass, to admit the rays of light; behind it is the small chamber containing the aqueous humor, then a hole, called the *pupil*, through the iris, to allow the rays of light from different objects to pass into the interior parts of the eye, first passing through the crystalline lens and through the vitreous humor, and then forming an image of the objects on the delicate membrane called the retina, which is spread out on the back of the eye. Now up to this point ordinary vision may be explained on optical principles, and the eye shown to be the most perfect optical instrument. But the moment we attempt to pass beyond the retina, science is at fault; no natural philosopher has been able to explain *how* the optic nerve conveys the image to the brain; we know that the mind is conscious of the images formed on the retina—or, in more familiar language, of the things seen by the eyes—but in what manner an opaque nervous cord, differing in no essential particulars from other nervous cords, conveys that impression to the mind, we are entirely ignorant. Ordinary sight has, therefore, *a psychological basis*—and this is admitted by the best physiologists.

37. Clairvoyance, or internal sight, assumes the same **Basis** necessary to perfect ordinary vision; but as it

acts independently of the external visual organs, so it is not trammelled by those natural laws to which they are necessarily subject. Thus by this internal sight, and by light issuing from within, and not from without, as in common sight, things may be seen which are out of the range of natural sight, and altogether above its nature. For instance, our physical sight can see the remote starry orbs, placed at the distance of perhaps thousands of millions of miles, because the undulations of light proceeding from them in straight lines can impinge, or strike upon the retina of our eyes. Yet the intervention of any opaque body immediately shuts out the vision of the object, even if placed in close connection with us; so that if our *penetrating* powers of sight were immensely increased, whether naturally or artificially, still the rotundity and opacity of the earth would prevent us seeing beyond a certain distance. But opacity is no barrier to internal sight; objects to which the mind is directed, either designedly or spontaneously, will be equally visible through doors and walls as if placed directly before the face. Nay, to the higher stages of clairvoyance there seems, comparatively speaking, no bounds; for whether the object sought be in the same house, or town, or country, or across the broad Atlantic, or still remoter Pacific oceans, it appears to be found and seen with equal facility, and to be equally near to the internal perception of the truly clairvoyant individual. The human body is seen as clearly, and its living actions described as plainly, as if the external and internal parts were alike as transparent as glass, and this also, without any bodily connection, such as by bringing the clairvoyant and the person to be described together, but, as I have proved, when more than one hundred miles have intervened between them.

38. But we have now arrived at a stage in our enquiry where physiology ceases to afford us light; for physiology as such, that is, as the science of our outward living organism, knows nothing of an internal or supersolar light, or of sight that can penetrate alike through *opaque* and *transparent* substances. To psychology and philosophy we must therefore look for aid in our endeavor to investigate the apparent mystery of this interesting subject. And I regret that the abstruse nature of the enquiry, the little that is *generally* known in this branch of knowledge, together with the necessary brevity of popular lectures, will only permit me to present you with a sketch of the views opened to the eye of rational research.

39. It is usual to represent man as composed of *mind* and *matter*—Soul and *body*. This is correct. And as we find that the body is not a mere simple uncompounded substance, but a collection of innumerable parts and organs, so, by parity of reasoning, we may conclude, that the mind, or spiritual body, as the parent and director of the natural body, cannot be that simple entity, that *abstract nothingness* so generally represented by metaphysical writers; but rather that the controller of the animal organism must be itself organized according to the laws of its own peculiar nature, and capable of manifesting those laws, under certain circumstances, through those organs of the body, that is, of the brain and nervous system, which are united with it by the law of correspondent activity and con-

nection. St. Paul, therefore, spoke the language of the profoundest philosophy, when he declared that there were spiritual bodies and natural bodies, and that the natural body was the first in its development, and *afterwards* the spiritual body; and when, on another occasion, he defined the entire human organism, as existing here, to be a compound of "spirit, soul, and body," in this respect giving his apostolic sanction to the doctrine of the ancient sages of Greece. The two first terms used by the apostle to describe the spiritual part of man, are, in the original Greek, *Pneuma* and *Psyche*, and the latter term, which in our version of the Scriptures is, in the passage alluded to, translated *soul*, is, by the Latin writers called the "*animus*;" and this term is always used to signify the *animal soul*, as distinguished from the pneuma, or more interior human spirit.

40. And here it will be as well to observe, that no truth is more evident to sound rational enquiry than that the Creator has given to every department of his "handy-work" *a specific* character, and that from the Creator to the lowest inert matter, there exists a *chain* of DEGREES—and that each object of creation can only be well and truly studied by viewing it in its *own degree*, and comparing it with objects in *another degree*. But if we confound this distinction of degrees, we shall never arrive at a clear and satisfactory solution of many important facts. Each degree will be found to have laws or properties peculiar to itself, and if we transcend the degree of the object of our enquiry, by applying to it qualities or properties belonging to another distinct degree, we may expect nothing but confusion and mys

tery. Now, in our investigation of the nature of man, it is especially necessary not to overlook these distinctions. By no process can matter be sublimed into spirit; and spirit having, according to apostolic authority, and the general *law of analogy* observable in all things, its distinctions and degrees, the properties of the *lower* degree may not apply to a *higher* one. True philosophy also teaches, that if spirit in no degree is material, that is, does not possess those properties which we apply to ponderable matter, still it is no less on that account a truly real and substantial existence—more truly substantial than the granite rock, because, more unchanging and more enduring.

41. Now viewing the spiritual organism of man as consisting of two distinct degrees, called by the apostle the pneuma and psyche, or as possessing both a spiritual internal and external, together forming, while in this mortal life, the *common internal* of the natural organism, the PSYCHE or ANIMUS will be the connecting medium between the pure human spirit and the nervous system of the natural body. By its connection, through correspondence and vital affinity, with the body, it is placed in relation with outward nature, while as a spiritual entity, and by its indissoluble union with the higher spiritual principle, it has, at the same time, immediate connection with the spirit-world; and because it is a subject of the laws, and possesses the properties of that world which have nothing in common with *time*, *space*, or *common matter*, it displays those powers which can be explained by no merely natural or physiological knowledge, but which receive an easy, rational, and satisfactory solution, when man is really

seen to be that which revelation, philosophy, and the statements of true clairvoyants declare that he is—namely, a compound of spiritual and natural organisms intimately united by the exactest correspondence or analogy. And that although the lower, or natural organism, cannot act without the continued influence of the higher, or spiritual organism, nor can the spiritual organism be developed without the medium of the natural one, yet, when developed, the higher organism can act, not only by and through the lower organism, but even independently and when disconnected from it.

42. It is this psyche or animus—the *external of the spirit*—that, from all that I have yet learned on the subject, I take to be the true seat of what is called mesmeric influence; the psyche, or animal soul of the operator, influences the same external spiritual organic principle in the subject, and from the animus the influence flows *downwards*, to use analogous natural terms, and thence affects the brain and nervous system—and hence I propose to call that part of mesmerism, which manifests mental and super-sensual phenomena, by the name of PSYCHEISM, or, *the Science of the Soul as manifested in nature*—while to the lower and physical stages, the name of SOMNOLISM may be applied, as indicative of its sleep-like and dream-like character.

43. Now as to the *psychological change* induced by mesmerism.—It is a common law of our being that conscious perception should have its apparent seat in the *ultimate*, or *extreme*, of every development. Thus, although it is a well-established fact, that the sensorium is within the brain, and that if a sensory nerve be divided, no sensation will be experienced, yet it is as well

known that if we prick a finger, the pain will be felt where the wound is inflicted. So, notwithstanding the body feels and acts by and through the spirit, our conscious perception, in the usual normal condition, is confined to the bodily organization—because, while in the present state, *the body is the ultimate development of the spirit.* When death severs the connection between mind and body, the *ultimate* of the immortal man is the psyche or animus, and *to it* is transferred all conscious perceptions and sensations. It is from this differing seat of the conscious perceptions that, in our ordinary state, we have no *sensational* knowledge of the spirit-world, or of its laws. But psycheism, or the higher stage of mesmerism, may aptly be compared to partial death—for it is a *closing* of the common external of our being, a *transfer* of the *sensational* perceptions from the *ultimate of the body* to the *ultimate of the spirit*—and thence, and simply from this transfer of ultimates, arises an awakening of the conscious sensational perception of the inner man, or spirit. All those apparently miraculous powers which we sometimes see displayed by good mesmeric subjects, are, in fact, but the result of the psyche or animus being so far set free from the bodily ultimate as to enable the spiritual body to act nearly, if not quite independently of the sensual organs, and by perception, and in light from an inner world; but the connection of the mind and body is yet sufficient to enable the soul's sight and feeling to be manifested to our physical senses by and through the natural organization of a clairvoyant.

44. From this transfer of consciousness and sensational perception, we may also account for the anoma

lous, and often incongruous, statements and descriptions of clairvoyants. They forget much of that mode of speaking of things which is common to our external condition, but which, in itself, is often purely arbitrary and conventional; and they speak according to their newly-awakened and uninformed consciousness. As we have to learn to talk, and even to see, or rather rightly to interpret what the eye reveals, so do clairvoyants require a continued exercise of their peculiar power to familiarize them with its use.

45. We now proceed to explain the manner by which the influence of the operator is brought to bear upon his subject, and that sometimes too, at considerable distance; for I have found a subject affected by my influence, even when mesmerising another party, at the distance of a mile—but this may be considered an unusual case. It is a law of nature that all things should be surrounded by an effluvium or sphere which emanates from them, and is always of the peculiar nature or quality of the body from which it emanates; and these effluvia are regulated by certain definite laws. Thus the *fragrance* which surrounds the rose is the effluvium or sphere emanating from it; and this effluvium, by being dissolved in the surrounding ærial atmosphere, becomes sensible to our organs of smell, and *an idea* of its existence and quality is then transmitted to our *general sensorium*. But there are effluvia of which we should for ever remain ignorant, did we not perceive them *rationally* by their EFFECTS. Thus around magnetized and unmagnetized iron, an effluvium or sphere prevails, of which, in their *separated state* our senses give us no evidence. But we have only to bring them

into such proximity as to be *within the influence* of the *law* regulating the activity of their respective spheres, and their existence may then be instantly perceived in their mutual attraction and coherence. For it has been shown by one of the profoundest of philosophers, that these single spheres have the property of blending into one larger sphere, and that hence arises what is called magnetic attraction.

46. One of the results of the higher stages of clairvoyance, or independent internal sight, is the knowledge, that an effluvium or sphere analogous to what we have alluded to, surrounds the mental organism or spiritual body of every individual. Following the general law of nature, this sphere possesses the peculiar mental qualities of the organism from which it emanates. And hence arises the *repugnance* which is felt to the society of some persons, and the pleasure which is experienced in the company of others; and to it are referable all the remarkable instances of SYMPATHY and ANTIPATHY so frequently observed. But in these ordinary cases the active cause is latent or hidden; yet in the higher mesmeric, or rather psychic state, it often becomes sufficiently obvious even to our physical senses, for we may here see that, similar to what we have said of terrestrial magnetism, there is an actual blending of spheres. The magnet induces its state on the iron, so that it becomes magnetical; and the operator induces his sphere on his patient or subject, so that the subject becomes, as it were, *one body* with himself—the *egoism* or self-consciousness of the one being blended with the *egoism* or self-consciousness of the other.

47. **Here then is the *psychological* cause for the**

physiological state already mentioned. The change of state induced upon the *animus* of the subject is the *primary cause* of the change in the condition of the cerebrum; the collapse of the cerebrum closes the external consciousness, while the union of the spheres emanating from the animus of both operator and subject, causes the latter to perceive, as in himself, what really is felt in the active cerebrum of the former. And this change of state affords, I believe, the true psychological solution of the whole apparent mystery of catalepsy, phantasy, and many other curious mesmeric phenomena. As regards phreno-mesmerism, the arousing into activity one particular organ of the brain, as it would be called by one class of phrenologists, or faculty of the mind, as it would perhaps be called by another class, without the guidance, control, or balancing powers of the other organs or faculties, is a sufficient reason for the effects we see displayed.

48. But although the transfer of consciousness, and the blending of the spheres of the operator and subject, will account for many curious and otherwise inexplicable phenomena, it does not account for independent clairvoyance. Nor do I think it can be reasonably accounted for, but on the grounds already intimated—namely, the awakening of the sensational consciousness of the external of the immortal body, that is, of the psyche or animus. For I reject as purely hypothetical, altogether without evidence, and contrary to established laws, that theory which would attempt to solve it by an imaginary change of poles, or the transfer of life from the animal to the organic system. According to the latter theory, the lowest mollusk ought to possess a

more extended and spiritual perception than man; and man is to be spiritually elevated by being degraded to a level with the lowest forms of organic life.

49. The great difficulty hitherto experienced in arriving at a knowledge of the real cause of clairvoyance, has arisen from two causes; first, the *different states* of the clairvoyant subject and the observer, and the impossibility of their having the same sensational perceptions—so that the observer cannot sensationally perceive *how* the clairvoyant sees, nor can the clairvoyant adequately describe his perceptions. And, secondly, the necessity for the opening of a *higher degree of consciousness* in order fully to comprehend the lower. For instance, an animal can have no proper idea of its own nature; but man is enabled, by the possession of an internal spiritual principle, rationally and sensationally to investigate his animal body. And the mere induction of the faculty of clairvoyance does not enable the possessor of that faculty *sensationally* to perceive the *cause* of that phenomenon; this requires the awakening of a higher consciousness, though still probably belonging to the psyche, or animal part of the spiritual organism. But in this respect I have an advantage over most enquirers, in possessing a subject, who in addition to the ordinary *induced* mesmeric extasis or trance, has repeatedly been in states of spontaneous extasis of a far higher and more interior character, and the reality of these states has been proved to me by the most convincing evidence. One striking difference between these two states is, that whatever occurs to, or is seen by, the ordinary mesmeric extatic, is completely forgotten, or, more correctly, is altogether

unknown upon the return to the normal state, while the true extatic, or subject of the SUPERIOR *state*, as Davis, the American clairvoyant styles it, upon returning to the normal condition, recollects all that has been manifested to him in the abnormal condition. This singular fact receives an easy solution, if we admit the psychological doctrine, that man possesses both an *internal* and *external* memory. In the normal wakeful condition these memories act as *a one*, and hence we are only conscious of one memory. In the abnormal state of *induced* mesmerism, the *internal* memory is active while the external is dormant; and from this want of connection between the two memories arises the oblivion invariably witnessed. But in the *superior state*, or true spiritual extasis, both memories are active, but from a more interior degree than in ordinary life; and hence the extatic subject can recollect in the normal state what has transpired in the spontaneous abnormal state, and, at the same time, possesses a full consciousness of the great difference between these states, so as not to confound the perceptions and knowledges of one with those of the other.

50. A remarkable revealment of this *superior state*, or *spontaneous extasis* is, that every man while in this mortal life, is by the very laws of his being, and hence, of course, by the design of the Creator, intimately, though unconsciously, associated with the spirit-world, and this especially by what may be styled *his associate spirit*, and that in the memory of this associated spirit is, as it were, a reflection of all that exists in the memory of the associated man; so that distinctly to perceive the associated spirit is tantamount to a full per-

ception of the *character*, both mentally and physically, of the associated man, as well as of the information possessed by him. There is also a reflection of the natural organism of the man, both externally and internally, and also of the scenery perceivable by his natural senses.

51. A *true clairvoyant* is one who, by the opening of the internal consciousness, has a sensational perception of the objects of an inner or spirit-world, that is, provided the clairvoyance exists in *a sufficient degree*. If the attention of the clairvoyant is directed to any individual, the effect is to bring the clairvoyant into a *sensational* connection with the associate spirit of the person sought for; and from the normal recollections being treasured up in the *internal* memory, while the *external* memory, and all immediately connected with it is *quiescent*, *this associate spirit appears to the clairvoyant to be the real individual sought*—and from this source, and the *reflection of memory* above alluded to, is often obtained much of the information the clairvoyant is able to communicate respecting persons and scenery. But as man, even in this mortal life, is internally a true spiritual organism, and *as such* is, as we have already observed, a subject of the laws of the spirit-world, a clairvoyant may have a *sensational perception* of this spiritual organism, and *thence* of the natural organism, and thus of the entire man himself, however distant they may be from each other as to their natural bodies. Yet still, it is probable, that this *direct* connection is *mediately* effected by the aid of the associate spirit. Here then is the simple and rational, though deeply interesting solution of the un-

doubted fact, that by clairvoyance the actual condition of a person totally unknown to the mesmeriser and his subject, and across the broad Atlantic, has been correctly told. This I have seen extremely useful in a medicinal view—for by directing the attention of a sufficiently lucid clairvoyant to a distant patient, the disease under which the patient was laboring has been discovered, and every interior organ of the body described, both as to its actual condition and general action.

52. Most clairvoyants, strictly so called, are also LUCID, that is, they can see natural objects by an interior perception, independent of the usual visual organs, and, on this account, even when opaque substances intervene. *How* the impression of these outward objects is conveyed to the sensorium is difficult to understand; the fact that such is the case cannot be doubted by any one who has carefully examined the subject. In ordinary vision the mind does not actually contemplate the outward visible object, but the perception of that object as existing in the *imagination.* I do not use the term in the sense of *mere fancy*, as is sometimes done; but by imagination I mean *the general power of the sensorium to form images within itself of objects that are without itself.* I, therefore, consider it a true and proper faculty of the psyche, or animal mind, and thence as a sense above the ordinary senses of the body, and to which they are subservient. For it is by the outward senses, which depend on nervous influence, and their connection with this inward *image-forming* faculty, that mind and matter are brought into mutual relationship and connection.

Whether, therefore, it is by ordinary sight, by cerebral lucidity, or by the suggestions of another's mind, that the ideas of the objects are transmitted to the sensorium, they are equally *subjects* of the image-forming faculty when there, and equally real. I have partially demesmerised a lucid subject, so as to restore the normal conscious state, without demesmerising the eyes, and by that means produced *conscious lucidity*. Every thing was then stated to be seen in a most brilliant light, altogether different to common light, whether solar or artificial; and at the same time all the surrounding objects were seen *at once*, and yet a sense of their separate identity remained. Generally they seemed greatly magnified, and to have more or less of brilliancy about them; all which seems to indicate that the independent action of the sensorium produces more vivid images of the objects impressed upon it; and this might be expected from the exaltation of the senses by the opening of the perceptions of a higher ultimate.

53. We have now taken a brief survey of the principal mesmeric phenomena, and endeavored to account for them, as far as experience, observation, and reason, and necessary brevity will permit. Before concluding, I will notice two questions often proposed, though not always in the spirit of calm enquiry, but rather in that of querulous objection. It is asked, "Whether all persons are subject to mesmeric influence? and why all cannot be made clairvoyant?" In reply to the first, I answer unreservedly, that I believe all persons *are susceptible* of mesmeric influence, but in a very different degree; and this difference we might anticipate from the widely differing nervous temperaments and idiosyn-

crasies of individuals. Some will scarcely feel the influence, while others will soon fall into the "sleep." But as regards the *curative* influence of mesmerism, experience has fully proved that very great benefit may be derived without any loss of consciousness, or even any *perceptible* change of state. Yet the inducing of the *coma*, or mesmeric sleep, generally gives the operator more power over the patient. Let it be remembered, that the great use of mesmeric influence is as a *curative agent*, auxiliary or supplemental to medicine, and that the various exhibitions of catalepsy, phantasy, phreno-mesmerism, etc., are only useful as manifestations of the true nature and capabilities of the human organism. With respect to the second question I would observe, that I have been enabled to learn, that lucidity and clairvoyance can only be developed in individuals who possess a peculiar cerebral organization. This peculiar organization may be normal in some few cases, that is, it may consist with a good state of health; but in many cases it may be traced to some affection of the brain consequent on disease, and the possessor of the faculty will be delicate in health, and less fitted for the ordinary avocations of life. It is not, therefore, a faculty to be generally looked for or desired; but where it does exist, it may be most beneficially employed; and, on the other hand, it may, like all other things, be abused, though possibly, not without ultimately entailing punishment on the offender. In proper hands it may be advantageously used to ascertain the cause of disease, and the best method of effecting a cure; and it affords us a means to acquire most interesting information as to the true nature of our indwelling immortal spirit.

54. In conclusion, permit me to observe, that a calm investigation of the psychical phenomena developed by mesmerism, may become of great use in furthering the interests of religion and morality. By this means we may demonstrate that there is an *internal* way to the mind, as well as the usual external way of the outward senses. This, although admitted by believers in the authority of the Holy Scriptures, has been generally denied by an influential class of writers. It also tends to illustrate and confirm some of those striking and interesting Scripture narratives which have been so often assailed by scepticism and infidelity; and it presents man to us, both in his relation to the spirit-world and the natural world, being, even while tabernacling in mortal flesh, as to his interior, mental, or spiritual organism, in direct communication with a spiritual world, and thus capable, by the very laws of his being, of receiving influences from God and spiritual intelligences, while, by his material organism, he is constituted in direct relation with all outward things. Man is thus presented to us just in the light we might expect, considering that he is the crowning work of the Great Creator's skill. For we may see that he is really and truly that link in the great chain of creation, which God has made to join heaven to earth and earth to heaven!

APPENDIX.

MESMERIC AND PSYCHICAL EXPERIENCE.

1. E. L., the young woman who is the chief subject of the following notes, is a native of Worcestershire. She is about five feet two inches in height, rather sallow complexion, and of a nervous-bilious temperament. Her health, although at times tolerably good, is not robust, nor is she capable of much continued exertion. Before coming into my house, she had been the subject of inflammatory disease of the chest, and of fever, and not long before coming to Bolton, she had been an inmate of the General Hospital, Birmingham, on account of an injury received in the knee. The treatment there had reduced her general health, but improved the knee. She was in this state when I first saw her. Her head is well formed and fully developed. Before the time about to be referred to, she was wholly ignorant that she possessed any peculiar mesmeric susceptibilities. She has since expressed an opinion, that the extraordinary condition of her brain is the result of a very large dose of opium, which she once took by mistake, and which, for a day or two, occasioned very serious symptoms. But this may be considered as very doubtful. She completed her twenty-second year in December, 1848. She will be constantly referred to by the name of EMMA.

2. Towards the close of the autumn of 1846, my attention was directed to the action of the vapor of ether in obliterating the sense of pain—it having been recently brought into public notice for that purpose. Before this time I had seen the vapor of ether used as a substitute for the nitric oxyde, or laughing gas, and had

noticed the intoxicating and exciting effects it produced; but I was, like others, ignorant that it blunted, and in some cases, entirely removed, the sense of pain. Hearing me talk of the effects of ether, Emma said that a cousin of hers had "*mesmerised*" her and another young woman with ether, which they "*sucked*" out of a bottle—indeed, she called it "*The mesmerise.*" Being anxious to test the truth of the reports then in circulation, I asked her if she had any objection to let me see her inhale some of the vapor? She replied, "None at all, for she had no fear of its hurting her." I, therefore, fitted up a common Winchester quart bottle, merely by putting a piece of brass tubing through the cork, which went half way down the bottle, and two or three inches above it. About half an ounce of sulphuric ether was put into the bottle, and the bottle well shaken, to mix the vapor with the contained air; I then gave it her, and told her to put the pipe to her mouth and gently draw in the air in the bottle, without closing the nose, or using any of the valvular apparatus then in use. In less than five minutes I observed that her hands began to loosen their hold of the bottle, which I then removed, the pupils of her eyes became dilated, and presently the eyelids closed. I now found her insensible to pain, or rather to evince *no feeling*, which was ascertained in various ways, such as pinching and pricking various parts of the body, endeavoring to excite tittilation, and even by thrusting pins under the finger nails, but she did not evince the slightest consciousness of these experiments; on the contrary, she was soon in a merry mood, and believed herself to be among her old companions in her native place, rambling through fields, and performing, as she supposed, many rural and domestic occupations. She would laugh, dance, sing, and do many things which were suggested to her; but when awakened, she had scarcely any, if any, recollection of what had occurred. These abnormal states were continued longer than intended, on account of the difficulty experienced in arousing her; for on one or two occasions, nearly two hours were expended in fully restoring her.

3. Other individuals were now tried, but only one was found

at that time, at all similar to her in susceptibility to the ethereal influence, and that was a youth who had been mesmerised by Mr. Spencer Hall, when that gentleman was lecturing in Bolton. The same bottle, in like manner, with about half an ounce of ether in it, was given to him, and in five minutes he became insensible, and then exhibited similar phenomena to Emma, but not so striking. He talked and acted, and, like her, imagined himself to be in another place than where he really was. In about half an hour he spontaneously awakened.

4. The very small quantity of ether subsequently found sufficient, merely enough to scent the bottle, induced an opinion that, in Emma's case, the ether had very little to do with the strange things witnessed, but that she was, in a manner, *mesmerised*, or rather *hypnotized*, by looking at the bottle while inhaling through the tube. It was therefore resolved to try another experiment. One evening I told her to sit down, and taking a small pocket-comb desired her to look steadfastly at it. She did so, and in a few minutes fell into the simple mesmeric or hypnotic sleep. Afterwards a small magnet was used for the same purpose and with the same results. A few days further on, I mesmerised her in the usual mode, that is, by looking fixedly at her. The youth mentioned above was also submitted to a similar experiment, by causing him to gaze steadfastly on a small magnet held a few inches from his eyes. In both cases, results were obtained similar to those following the use of the ether, namely, insensibility to pain, and a sort of somnambulic wakeful dreaming. In both these cases the only difference yet perceptible between the effects of the ether and those resulting from hypnotizing or mesmerising was, that by the latter mode the limbs could be made rigid—cataleptic, as it is called—while no such rigidity could be induced after the inhalation of the ether. Up to this time, dancing, singing, and doing various things which were *audibly suggested*, as if they were real, and rigidity of the limbs, after downward passes, were the only phenomena noticed; and it was thought that the statements made by some writers, of the *personal influence*

of the operator over the subject, were merely fanciful, and not warranted by fact.

5. Some time in the summer of 1847, while experimenting with Emma, I accidently placed my hand on the part of the head marked on busts as the organ of veneration; she immediately began repeating the Apostle's creed; when my hand was removed she ceased, and when it was replaced she commenced repeating where she left off. This was the first manifestation I got of the phrenological sentiments, and interested me greatly; but it was some weeks before I succeeded in exciting the other sentiments or feelings. Afterwards benevolence, veneration, firmness, self-esteem, philoprogenitiveness, acquisitiveness, combativeness, etc., were easily excited, and often most powerfully manifested. Up to this time, no absolute proof of *personal influence* was discovered, but she became more easily and quickly mesmerised, and as easily awakened into the normal state.

6. It was now found that Emma would exhibit all the usual mesmeric phenomena, such as catalepsy, or rigidity of the limbs—for she could be fixed immovably in any position by the action of a few passes; she could be so far demesmerised as to be restored to outward consciousness, and yet be unable to move the mesmerised arm or leg. *Attraction* she could also manifest, even in the same conscious state, as I often had the opportunity of showing to friends and neighbors, who were as much surprised as amused. For example, a piece of money would be placed on a table at a distant part of the room, and it was told her she might have it for fetching it. She frequently essayed to do so, and would sometimes very nearly reach the money; but invariably, my will, and the drawing passes I made towards myself, overcame her power, and notwithstanding her determined efforts, would draw her to myself, and render all her endeavors to secure the money ineffectual. On these occasions, she described the sensations she experienced as being like cords wound round her and drawing her. The various phenomena of phantasy could also be most readily produced; but when she became clairvoyant, if she was desired *to look at* the object that

she *imagined* to be so widely different to what it really was, she would instantly perceive the *delusion*, and dash it from her; and yet, within a minute or two, she could be as easily deluded again. But the investigation of these ordinary mesmeric states was not confined to those exhibited by Emma, but their truthfulness was further confirmed in the case of several youths, who were experimented upon, both privately and publicly, and who exhibited the same phenomena, but modified in each case by the general character of the individual. Since the period referred to, Emma's susceptibility has considerably increased, and now I can fasten the arms, hands, or mouth, or fix her to the spot on which she may be standing or sitting, by a single movement or pressure of my hand, *without putting her into the mesmeric sleep.*

7. It was not long, after Emma became so fully susceptible, before opportunities occurred for proving the reality of *personal influence*, and that a highly mesmeric subject may be acted upon, even when wholly unaware of the exertion of such influence. Many experiments were tried to ascertain the truth on this point; but I will only mention three among many cases that took place spontaneously, or rather, which occurred without my mind being directed to her. Once a gentleman asked me unexpectedly, in a neighbor's house, several doors from mine, to mesmerise him. I tried, but did not succeed. On returning home, I found Emma in the mesmeric state, and, upon enquiry, found that she had gone into that state while I was endeavoring to mesmerise the gentleman. On another occasion, I was wishful to induce the mesmeric sleep on a lady, for the relief of a rheumatic affection from which she was suffering. Finding the continual *stare* very fatiguing to my eyes, and also expecting to be called away by patients, it occurred to me, that if I directed her to look steadfastly at something, it might answer the same purpose, and allow me to leave her, without interrupting the mesmeric action. I therefore arose and took a small magnet and suspended it by a wire from a hook in the ceiling. Emma was in a room under where I was operating, and knew nothing of my movements. In a few

minutes the smell of burning linen arrested my attention, and I desired my daughter to go down stairs and ascertain the cause. She called to me quickly to come down; I did so, and found Emma *mesmerised*, and on her knees before the fire, engaged in sweeping the hearth, and her apron on fire, from contact with a burning coal that had fallen from the grate—but of this she was unconscious, and her attention was wholly directed to a point in the ceiling of the room. Having asked "What she was doing or looking at?" she replied, "*I want that magnet*." Upon enquiry, I found that she had been engaged just under where I was sitting; the influence had passed through the floor and ceiling and affected her unconsciously in the room below, and being now clairvoyant, she immediately saw the magnet through the ceiling, etc., and pointed accurately to its situation. But from the locality of the room, and the magnet having been used without any previous intimation of my intention—in fact it did not occur to me to do so until the patient had been some time seated—she could not possibly know of its being in the situation in which I had placed it, by any *normal* means. Here then was one, among numerous spontaneous instances, of the transmission and reception of a *personal influence*, and of the reality of clairvoyance. On another occasion, I was called to see a patient residing more than a mile and a half from my residence; the case was one of *delirium tremens*, and I resolved to try the soothing influence of mesmerism, and, in this instance, succeeded in a few minutes. On returning home, I found that Emma had gone into the mesmeric state at the time I was operating on my patient; but, fortunately, she was in a situation where no harm happened to her. By way of experiment, I frequently mesmerised her when in another room, and unknown to her; but in the above-named, and other cases, I did not think of her; and the circumstance can only be explained from her known susceptibility and my being actually engaged in exerting a mesmeric influence and intention. This extreme susceptibility to my personal influence, for a considerable period, prevented my using mesmerism as a curative agent, inasmuch as I feared to exercise the power, unless I knew that Emma was in a place of safety, and would be kept from danger, in case she should become unawares mesmerised.

8. In the early part of 1847, Emma wished to have the vapor of ether administered, with the view of having an aching tooth removed without pain; but the striking effects I had seen follow upon mesmerising her, induced me to refuse the ether, and, in the evening, to mesmerise her, and thus further test the power of the mesmeric sleep to subdue pain. About 9 o'clock that evening I desired her to sit down; induced the mesmeric sleep, and then leisurely got the necessary instruments; lanced her gum; extracted the tooth; as soon as the bleeding was arrested, washed her mouth, and then aroused her. The entire time from sitting down until fully aroused, was just *fifteen minutes.* During the operation she did not evince the slightest sensibility; but as soon as the removal of the instrument gave liberty to her mouth, she began to hum a tune, even while the blood was flowing. On awakening, she knew nothing of what had taken place after going into the sleep, and could hardly be persuaded that the tooth on the table before her had been extracted from her jaw! Some time afterwards, Mr. Patrick, surgeon-dentist, of Bolton, extracted a large decayed molar tooth from her lower jaw, under similar circumstances. On the latter occasion, several friends were witnesses of the operation.

9. DISCOVERY OF LUCIDITY AND CLAIRVOYANCE.—In the autumn of 1847, it was told me, that there was a young woman in Bolton, who had travelled the country with a mesmeric lecturer, and who had been for a long time CLAIRVOYANT. Having heard much of this wonderful faculty, I was desirous to see her. She was soon afterwards introduced to me for examination. I found that she was very easily mesmerised, and in that state she knew me and others in the room; also, that she was fully susceptible of feeling; in these respects differing widely from Emma. I could not, therefore, fully satisfy myself as to *the reality* of the mesmeric state. The young woman said, that she had formerly been in the same state as Emma, but had

passed beyond it; and from subsequent experience, I think this may be correct. She told me that she had been taken by several London physicians to examine the internal organs of patients by the faculty of clairvoyance; but when I saw her, her powers seemed to be confined to reading books with large print, with the eyes bandaged. I tried the experiment several times, but never felt satisfied with the result; as from the position in which she placed the book, the time occupied in the endeavor, and the occasional wriggling, I could never be certain that she did not see under the bandages. At other times, I was certainly much surprised at the readiness she evinced in describing a book I had in my hand. On the whole, I concluded, that her possession of the faculty of clairvoyance was, to say the least, doubtful. But it soon after occurred to me, that if she ever could see in the manner she stated, perhaps Emma could see in the same manner. At all events, I had the most positive assurance that she went into the mesmeric state, and that in that state she could not see, but that the power of vision was wholly withdrawn; the *sense of hearing* alone connecting her consciously with the external world.

10. One evening I determined to try her. But at this period she could not read, and was ignorant even of the letters of the alphabet. I therefore chose pictorial representations for the test, as being a universal language, understood alike both by the learned and the unlearned. I took a school book belonging to my daughter, which contained various wood-cuts, and opening it at one, I placed it in her hand, saying, "Emma, what is this picture?" She took the book, and as if by instinct, placed it open over her forehead and upper part of the cranium, without the least attempt to look at it in the ordinary way, and said, almost directly, "Oh yes, it is a naughty boy catching flies at the window, and his mother is looking at him." This was the subject of the picture and the story annexed. There was a figure of a boy at a window, endeavoring to catch a fly, and another figure of a female standing in the room observing him. I felt most exceedingly surprised and astonished at the correctness of the description, being assured that she could not see it

by any ordinary use of the eye, or, in fact, by the eye at all. This experiment was repeated with many different pictures, and invariably with the same result; colored pictures were also tried, and it was found that she knew the different colors accurately; but on no occasion did she attempt to use the eye—she invariably placed the object over her head.

11. It was now thought, that as mesmerism evidently rested on a psychological basis, and that a manifest connection was discoverable between the mind of the mesmeriser and the mesmerised subject, she might possibly see these pictures somehow in my memory, and not from any independent power of vision. I, therefore, requested my daughter to select the pictures, and then to put them into my hand, without telling me the subject, or letting me see them. This was repeatedly done, and the pictures as accurately described as when I knew the subject. Still it was thought that my giving her the pictures might have some effect upon her; others, therefore gave her them, or she was allowed to take them herself from a number, or to turn over the pages of a book, without any one knowing what she had taken, or had turned to, until she had described what she had selected. But it was found that it made no difference, and demonstrated, that whatever was the *power*, or wherever the *seat* of vision, *it was her own*, and independent of any one else.

12. These, and similar experiments, have been successfully performed, in private, before a select company, and also before large public audiences; and this too, with her eyes covered with plaisters, and a bandage tied over the plaisters. Not that the plaisters or bandages made any difference; but they were used for the sake of convincing sceptical people. At this time, in ascertaining the subject of a picture, she first passed the tips of the fingers of the right hand gently over it (the left hand did not seem to possess the same power), and then placed it over that part of the head, marked on phrenological busts as the organ of IMITATION. If a book with prints on the pages was given her, she would pass her right fingers gently over the page, and if it was letter-press or blank, she would say, "Is

was nothing." But when she had thus found out the situation of the print, she would exclaim, "Oh yes! here it is;" or "I've got it." But whether the print was a wood-cut, or copper-plate, did not appear to make any difference.

13. A very curious phenomenon was now observed. Pictures of things did not appear to her *as pictures*, but *as the things represented.* So that *the picture* of a rose would convey as *vivid* and *real* an idea to her sensorium, as the *rose itself* would do to an individual in the ordinary state. Hence it was found, that if a picture of *thistles*, *teazels*, or other prickly plants, or of *bees*, was given into her hand, the moment the tips of her right fingers came into contact with the picture, she would exclaim that she was *pricked* or *stung*, and throw the picture from her with much violence and passion! Evidently proving, that the *representations* of things were to her *real;* and also suggesting, that she had a perception of the form of the objects, before placing the picture on her head. These experiments were performed many times, both publicly and privately. And from her invariable use of the tips of the right fingers, it was supposed that there existed some unknown but remarkable affinity, between the senses of touch and sight.

14. By the commencement of 1848, her power of internal sight had become so developed, or she had become so familiarized with her new faculty, that it was evident, from many things observed, that she could see such things *as her mind was directed to,* without any contact. As an experiment, small pictures, and various small objects, were placed singly, first in a card box, and afterwards in a wooden box; and these she told, at times, as readily as when out of the box and in her hands. At other times, more difficulty was experienced in satisfactorily determining that she could see them. This difficulty arose from two causes: first, from the manner in which she would describe what she saw; and, secondly, from an obstinacy of temper frequently displayed, when removed by mesmeric influence from *external* habit and control. Her usual manner was to describe things *as they appeared to her in the internal state*, regardless of the names imposed upon their

by custom; sometimes she refused to call things by their accustomed name, and would always describe them in her own way, before she called them by the common name. As an instance, the following may be given. At the second public lecture, in the Temperance Hall, Bolton, on the 9th of March, 1848, a gentleman in front of the platform suggested that a picture, from among others lying on the floor, should be put into a box, and given to her—she had then been bandaged for some time. A print of a cat was selected, and put into a card box; she put the box over her head, felt it carefully with her right fingers, and then, having by a smile and ejaculation evinced that she saw the contents, she began—"It is a thing; it is a dark thing; it has four legs, a tail, a head and two eyes; things round its mouth, and it sits by the fire and says *mew*, and it's a cat."

15. One cause of difficulty in attaining clear descriptions of the things to which her attention was directed, and sometimes even in getting her to notice them, was very early perceivable. In the exalted condition of mesmerism, her mind was peculiarly susceptible of impressions from the minds of surrounding persons; hence, when environed by a knot of sceptics, as was sometimes the case, their mental influence, unconsciously to themselves, would seriously impede the faculties of the clairvoyant; and then the feeling that something was preventing the usual development of her powers, caused irritation and obstinacy. At the period alluded to, when Emma was asked "How she saw things?" she would say, that suddenly "*glasses*" came to her, and also, that she sees every thing *in light* through these "glasses;" and the situation of these "*glasses*" she always referred to the organs of imitation. When this doubting, opposing influence was brought to bear upon her, she would exclaim, "They are darkening my glasses;" or "They have taken away my glasses." I frequently found that by making *passes* from the upper part of the head, *across* the organs of imitation, I could *produce* and *increase* the clairvoyant power, which she would evince by exclaiming, "Oh, its *so* light now,;" while by making longitudinal passes, from the vortex, over the forehead

and down to the face, the sight could be immediately closed, and she would be placed in a state of darkness. Bodily fatigue, or indisposition, would, at that time, and also does at the present time, considerably impair the powers, not only of clairvoyance, but all the other mesmeric capabilities.

16. Besides the description of pictures, etc., already noticed, she frequently described persons in another room, and said what they were doing; frequently, without having her attention directed to the inquiry. At other times she would unexpectedly, and unasked, tell individuals what they had in their pockets, or what sort of food was contained in their stomach. This often afforded matter for interesting experiments; and has been witnessed by many respectable persons in the neighborhood.

17. For a considerable time after she exhibited the most distinct lucidity, with respect to objects placed near her, no trace could be found of that distant clairvoyance manifested by some mesmeric subjects: but, eventually, this faculty became as clearly developed as the other. The first time I observed this power, was in the case of some near relatives in London. She described minutely the dress and appearance of these parties; their occupation at a certain time, and many other particulars, which were subsequently found to be correct. Once I directed her attention to a female relative in London. Emma speedily found her, and began to describe her residence, etc., but suddenly her attention ceased to be directed to my relative, and she became engrossed with the description of a magnificent residence, with its elegant and costly furniture; a lady lying in a superb bed; a beautifully dressed baby; well dressed ladies in and about the room; and another room in which were older children, also beautifully dressed, and attended by ladies. From many replies to my inquiries, I considered that the only place to which her impassioned descriptions could refer, was Buckingham Palace, for the accouchment of the queen had then recently occurred. I therefore said, "Do you see any soldiers there?" 'Yes," she replied, "there are soldiers at the door." I then saw that my conjecture was correct; but *why* she should have spontaneously gone there, without any request on my

part, or, indeed, any thought or desire in that respect, I could not understand. But after I had informed my relative of this occurrence, I obtained the clue to this singular transition from one subject to another. For I was informed that she had been thinking of the queen, and the interesting circumstances in which she was then placed; and had felt desirous that I should, as an experiment, try whether Emma had the power to visit and describe the interior of the palace at that time. The cause therefore, of Emma's unexpected *visit to royalty* was this: my relative had wished her to go there; when brought into mesmeric connection with her, the active sentiment of her mind, was communicated to Emma's mind; and by this means, her attention was unconsciously directed to the royal residence. But there was further confirmation that this was the true cause, and of the possibility of a mesmerised subject receiving impressions from the parties to whom their attention is directed. For when I knew, from my relative's letter, what had been the subject of her thoughts, I put Emma into the mesmeric state, and then asked her, "*How* and *why* she went to see the queen?" She directly replied, "L—— took me." But how did you get in if there were soldiers at the door? "O! I jumped over th soldiers; but L—— could not jump over them, and therefore she could not get in."

18. At this time, whenever *sent* on these *distant excursions*, she exhibited great fatigue and excitement; panting, and suffering from violent action of the heart. When asked why she panted so? she would say, "I've gone so fast,"—and "It is *such* a way!" She would also take my right hand and place it on her bosom: if I removed it, she said, "They are gone away now." But latterly she has not required any personal contact to enable her to exercise this faculty. Very many experiments were made to test this faculty: in some cases she was strikingly correct; in others only approximately so; for she would sometimes confound the recollection of *bygone* transactions existing in the minds of distant individuals, with *present* circumstances, and thus present a representation which required some explanation to unravel.

19. Having heard of clairvoyants *visiting the planets*, I determined to try the experiment with Emma. I therefore proposed *an excursion to the moon;* and not then knowing how to direct her attention to such distant objects; and she herself being, at the time alluded to, wholly ignorant of the mode by which a knowlege of distant things is obtained; and fancying that she actually traveled by some mode, I suggested the *electric telegraph* as an expeditious mode of conveyance. The suggestion answered the purpose, and she was, mentally, soon on our satelite. But on that and subsequent occasions, the great excitement produced by the strangeness of what she saw, and the *distance traveled*, caused such a palpitation of the heart, as to render it necessary to *shorten the visit*, by de-mesmerising her; being fearful that the great physical excitement might produce some serious effect on her health, if not immediate danger. Her description of what she saw was conveyed in very ejaculatory language; from the surprise and pleasure she experienced. Her statements were to the effect, that the moon is inhabited; that the inhabitants she saw were very small—dwarfs—not larger than children on our earth; their heads were large in proportion to their bodies, and the mouth *vertical* rather than *horizontal;* their voices harsh, and rough, and resembling the sound of distant thunder; and when they spoke, the speech seemed to come up from the bowels. Their "insides" were not quite like ours; the lungs especially were different. She saw some food, something that looked somewhat like bread, but they did not call it by that name. She saw only one animal, something like a very small pig. There dwellings were constructed of pieces of rocks, covered over with green stuff resembling gorse: they were very low, for she could put her hand to the top. The place did not look like what she conceived the moon to be; but a large place, and very rocky, with immense precipices, and lofty mountains. The "little folks," as she called the inhabitants, could clamber up these rocks with their hands and feet, so fast that she could not catch them. "Is there any water there?" "Yes: but it does not look like our water, but more like milk and water, and yet it is clear. (Meaning prob-

ably, that it is of greater density than our water.) It lies in the bottom of hollows, and down the steep precipices. The 'little folks' can walk upon this water and not sink; they are very light. They wear clothes; but they are very simple and all alike. They seem good sort of people. They have a curious way of jumping on the back of each other. A very little baby was seen in a sort of cradle; it died: they said what signified that, it had gone to sleep; but they did not mean sleep, but that it was dead."

20. At another time I attempted to send her to JUPITER; but the physical excitement was so great, that I thought it prudent to call off her attention, before I had obtained any definite remarks. She spoke of having been *further* than where she had before seen the "little folks;" and of seeing them as she came back.

21. Besides the power of seeing, by an internal sight, such things as were put into her hands, or to which her *attention was directed*, Emma would sometimes manifest a sort of apparently omnipresent vision. Thus she has frequently been asked to find missing or lost articles. After a few minutes consideration, she has said where they might be found; or, in other cases, got up and pointed out the place where they lay concealed. And this she has repeatedly done, when there was the most undoubted evidence, that neither herself, in the normal condition, nor the mesmeriser, nor any other individual, knew the situation of the articles she was desired to look for. Thus proving, that not only can an unusual mode of seeing be developed by mesmerism, but also an exalted degree of power, which makes all things, whatever their local position, appear directly within the sphere of vision. This power has been, on most occasions, called into exercise chiefly for the sake of experiment, and to test its reality; but it has also been applied to purposes of use. The following is a remarkable instance; and also valuable as placing the reality and powers of clairvoyance, or internal sight, beyond the reach of cavil or contradiction.

22. On Wednesday evening, December 20th, 1848, Mr. Wood, grocer, of Cheapside, Bolton, had his cash box, with its

contents, stolen from his counting house. After applying to the police, and taking other precautionary steps, and having no clue to the thief, although he suspected what was proved to be an innocent party; and having heard of Emma's powers as a clairvoyant, he applied to me, to ascertain whether, by her means, he could discover the party who had taken it, or recover his property. I felt considerable hesitation in employing Emma's powers for such a purpose; fearing that both the motive and agency might be grossly misrepresented. But the amount at stake, the opportunity for experiment, and Mr. Wood being a neighbor, induced me to comply with his request; and nine o'clock, next morning, was appointed for the trial. At that hour Mr. Wood came to my residence, and I then put Emma, by mesmerism, into the internal state, and then told her that Mr. Wood (whom I put *en rapport*, as it is called, with her) had lost his cash box, and that I wished her to tell us, if she could, where the box was taken from, what was in it, and who took it. She remained silent a few minutes, evidently mentally seeking for what she had been requested to discover Presently she began to talk with an imaginary personage, as if present in the room with us; but as it subsequently proved, although invisible and imaginary to us, he was both *real* and *visible* to her; for she had discovered the thief, and was conversing with his mind on the robbery. She described, in the course of this apparent conversation, and afterward to us, where the box was placed; what the general nature of its contents was, particularizing some documents it contained; how he took it, and that he did not take it away to his residence at once, but hid it up an entry; and her description of his person, dress, associations, etc., was so vivid, that Mr. W. immediately recognized the purloiner of his property, in a person the last to be suspected. Feeling satisfied, from the general accuracy of her descriptions, and also from her describing the contents of the box, that she had really pointed out the delinquent, Mr. W. went directly to the house where he resided, and which she had pointed out, even to the letters on the door-plate; and insisted on his accompanying him to my house; or, in case of but, as might be expected, in very homely language. I thought her at fault once; but found, that while I was thinking about the heart, she had wandered to the windpipe, with its rings. It was some time after the discovery of this faculty, before it could be used without inconvenience; for when her attention was directed to the internal organs of the body, the strangeness of the sight, together with the universal motion, and circulating blood, so terrified her, that she would tremble from head to foot; and, when awakened, complained of being ill and frightened, without knowing the cause. But, by degrees, she became familiarized with these investigations, and she will now calmly, and without any fear, examine and describe the internal organs. Her manner on these occasions is always serious and kind; her language soft, but, from her want of education, imperfect. Had she received an anatomical education, her gift would be more valuable, or rather, more accurate descriptions could be given; but, on the other hand, her want of education proves that she does not derive the knowledge of the internal organism of the body which she evinces, from her previously stored memory. The application of this power, appears to be one of the most legitimate USES of clairvoyance, and perhaps the most beneficial in its application. By it an accurate diagnosis may be formed of many internal diseases, which elude the ordinary mode of research. But to make a clairvoyant diagnosis, truly satisfactory, it often requires the aid of the medical practitioner, or the professed anatomist and physiologist, rightly to interpret the language of the clairvoyant. Many curious points in physiology, which, from the nature of the case, rested rather upon rational induction than positive demonstration, have, to my mind, been satisfactorily determined by the revealments of clairvoyance; especially as regards the action of the brain and nervous system, and the action of the heart; and the knowledges thus obtained have an important bearing on the mode by which diseases of these important organs may be cured.

26. On the 4th of August, 1848, a gentleman of Bolton brought a letter, written by a lady the wife of a physician in

sailed had long arrived. In a state of anxiety the young man's mother came twenty miles to Bolton, to see whether, by Emma's means, she could learn any thing of him. After a little time, Emma found him; described his appearance correctly; and entered into so many details, as to induce his mother to rely upon her statements; and to request me to make inquiries at intervals of about a fortnight. I did so, and traced him by her means to several places; and the information thus acquired, I transmitted to his parents. On the 24th of January, in the present year, I received a note from the young man's father, informing me that a letter had arrived from his son, and that "it was a most striking confirmation of Emma's testimony from first to last"

CLAIRVOYANCE AS APPLIED TO PHYSIOLOGY AND MEDICINE.

25. For more than eighteen months, Emma has been able to see the internal organs of the human body. At first, only when placed in personal connection with the individual to be examined; but subsequently, when the parties were many miles distant. In her best state, the human body seems to her completely transparent, and might be compared to, a watch, whose case and works were all of the most transparent chrystal. I discovered this power from her remarks on myself One evening she began to describe my lungs, as "*pink things*," full of holes like a sponge, with air in the holes, and thousands of little veins in all directions. She said the right lung was not so good a color as the left, and that it stuck at the middle flap. This I knew to be the case, and thought she might only be giving utterance to my own ideas. But I soon found that this was not the case; but, as in the case of the pictures, she really did see what she described. I asked her some questions about the heart, which she accurately described, as to the auricles and ventricles; the contained arterial and venous blood, etc ;

refusal, to the police office. When brought, and placed in connection with Emma, she started back from him, as if he had been a serpent; telling him that he was a bad man, and observing, also, that he had not the same clothes on as when he took the box; which was the fact. He denied strenuously all knowledge of the robbery, then, and up to a late hour in the afternoon; but as he was not permitted to go at large, and thus had no opportunity for destroying, or effectually concealing the box; and as Mr. Wood had promised, for the sake of his connections, not to prosecute, if confession was made, and the box and contents recovered, he, at last, admitted that he had taken it, and in the manner described by Emma; and the box and contents were found in the place where he had secreted them; broken open; but the property safe. It should be observed, that Emma had pointed out the place where the box was concealed, but we could not be certain of the place she meant, without permitting her, while in the *internal state*, to lead us to it: this the confession rendered unnecessary.

23. In other cases Emma has described articles that have been lost by parties placed *en rapport* with her, without her being asked to do so, or, indeed, anything being said respecting them. In some instances these have been most interesting experiments, affording evidence of her being able to trace a series of events, totally unknown to her in the normal state, back through a number of years.

24. Several times she has been directed to seek for persons in distant regions of the globe. Whenever she has found them, her statements of time and season, invariably coincided with the latitude and longitude of the places to which she has been directed. At present, one complete proof only has been obtained of her really having a distinct and truthful perception of such distant objects. A young man had sailed from Liverpool for New York, without apprising his parents of his intention of doing so, until the day the ship sailed. His parents immediately remitted him a sum of money by the mail steamer; but they were subsequently informed, that he had not applied for it; nor had any thing been heard of him, although the ship in which he

Gloucestershire, and this lady, who had heard of other clairvoyants describing the diseases of distant people, merely by using their handwriting as a medium of communication, desired that it should be given to Emma, to ascertain whether she could discover the condition of the writer. It must be remembered that Emma could not read printing, much less writing; the subject matter of the letter was of no consequence, it was the *handwriting*, as a medium of connection. Emma put it over her head, as she used to do with pictures, and carefully felt it with her right fingers, and then said "it was a lady's *up and down strokes*," meaning by that phrase, the handwriting of a lady. She described the lady, as to her personal appearance, accurately, even to a small blemish occasioned by an accident; the internal organs of the body; an affection of the spine under which she was laboring; the situation and appearance of the place where she resided, and many more particulars. The accuracy of her descriptions was admitted by the doctor; and, subsequently, I had an opportunity, personally, to verify some of her statements. The envelope of the letter was directed by the doctor; him she described correctly, both as to his personal character, general pursuits, and literary tendencies. This was an entirely new experiment; and finding the result so unexpected and striking, it led to many more; some of which were, apparently, more remarkable. Among others, I may mention the case of a letter written by a gentleman at Cairo, which was put into her hand. She soon said it was written by a gentleman, and described him, as to the condition of his health, and the place where he was residing, together with the climate and appearance of the people there, even to the peculiar veil worn by the Egyptian ladies. The correctness of her statement, as to the gentleman's condition, was ascertained from a subsequent letter. Locks of hair have also been similarly used as a medium; but the handwriting appeared to be the easier and better mode of forming the connection.

27. On the 29th of September, 1848, an opportunity was afforded for an entirely new manifestation of Emma's powers. A highly respectable gentleman of Manchester, having, at that

time, a daughter seriously ill with a cerebral disease, which baffled the ordinary medical treatment, and which, in addition to bodily infirmity, had produced a state of insanity, had been recommended to try whether by clairvoyance a mode of cure could be discovered. He came on the previous day; but Emma then being in the state of trance, to be presently described, he could not obtain the information sought. He left with me a few pencil marks made by the lady, as a means of forming a medium of connection. On the date above, I gave this piece of paper to Emma, and asked her if she could find the person who made the marks, and tell me what was the matter with her; for at that time I had no idea of her selecting any appropriate remedies. She soon found the lady; described, accurately, the external symptoms of her complaint, and also the internal condition of her brain; to which organ she referred the whole cause of illness. After recommending various mesmeric passes, she exclaimed, pointing at the same time toward the ceiling of the room—"There is what will cure that lady, along with mesmerism; Eh! what little bottles!" These she described as containing little things like the small comfits, generally called "thousands." I said, "Is there any thing like them in my shop or surgery?" "No! you have nothing like them." "Where can they be obtained?" "There—in that big town (pointing toward Manchester), in that shop with a head in the window; they are kept there in a drawer." It would not have occurred to me what medicines she meant, but that in the previous month, when in London, I had been shown, by a lady, a case of homeopathic medicines. I do not recollect ever before seeing any; and I was quite ignorant at that time as to the mode of preparing and using them. I am certain also, that in her normal state Emma knew nothing about, nor had ever seen, any of these medicines. The shop, I subsequently found, was Mr. Turner's, homeopathic chemist, Piccadilly, Manchester, and in the shop window, there was a bust of Hahneman, the founder of homeopathy. But I was ignorant that there was such a shop in that neighborhood, having seldom occasion to go to that part of the city I wrote to the gentleman informing him of Emma's remarks; and he directly purchased a case from Mr. Turner, and came over to Bolton to ascertain the particulars. The *sealed box* was put into Emma's hand, and as soon as she had put it over her head, she said that it contained the medicines she before saw; and pointed especially to the situation of one bottle in the case. When the case was opened, she selected a bottle from the place she had pointed out, and *tasted the globules through the glass*, without attempting to draw the cork. By way of test, the bottle was put into another part of the case, and other bottles slipped into her hand; but she invariably detected the change, by *tasting through the glass*, and putting the bottle to her forehead. From that time, the prescribed globules were daily administered, and the mesmeric passes regularly made; and the result is, the restoration of the lady to health, both in mind and body.

28. The result of this experiment opened a new field for inquiry, and led to repeated trials. A quantity of the usual medicines were mixed with sugar, and put into small vials, and given her with the homeopathic medicines, and these she would select and test in the same way; namely, by *tasting them through the bottle*. Sometimes she would select homeopathic remedies; at other times, the usual ones. She invariably calls those which she considers suitable for the disease, *nice;* the others she calls *nasty;* but I sometimes found, that the "*nice*" medicines were intensely bitter; such, for instance, as the sulphate of quinine. How she obtains this intuitive knowledge of medicines I cannot discover. The homeopathic remedies have generally been the best that could be selected according to that theory of therapeutics; and the usual medicines have been quite as judiciously prescribed, as to their *qualities;* but of the *quantity*, and mode of preparation she was unable to speak. Sometimes she was unable to point out any remedies for the disorders she described; and hence the necessity for a knowledge of the properties of medicine, in some one, in order to profit by her revealments. Her powers appear to be chiefly applicable to nervous diseases, and diseases of the lungs, liver, and heart. Many cases have been submitted to her, from different parts

of the country; and some of these, of a most serious character have been rapidly cured by an adoption of the means recommended. Since the period when this faculty for examining and prescribing for distant patients was discovered, a change has passed over her; and she can now do without any medium of connection; but requires the name and address of the party seeking relief, and that appears to be sufficient to enable her to discover them. But the handwriting of the patient, or the intervention of some friend, seems to insure greater accuracy. Upon awakening from these clairvoyant examinations, Emma has no recollection of any thing she has said or done; they being, in this respect, like all other *mesmeric* trances. But of course, the information thus obtained is available to the medical practitioner in all similar cases.

29. Her statements of the way in which some diseases are removed, and of the permeability of the solid tissues of the body, are very remarkable; but at the same time are in accordance with the suggestions of profound physiologists; and, moreover, they seem to be borne out by the facts of the case.

30. That *exalted sense*, before referred to, which enables her to see things to which her attention is directed, as apparently within the sphere of vision, whatever their locality, is also manifest, though in another mode, in her selection of medicines; for by *tasting through the bottle*, she has been enabled to identify the homeopathic globules with the tinctures from which they are prepared! This may be considered one of the strongest proofs that a medicinal virtue resides in them; for so highly attenuated are the dilutions with which they are saturated, that to the ordinary sense, they all taste alike, and merely of the sugar of milk, of which the body of the globule is composed; and I understand that they are not cognizable, even by chemical test.

SPONTANEOUS EXTASIS, OR TRANCE.

31. The foregoing notes refer to the phenomena witnessed in the state of induced extasis, or mesmeric trance; the ensuing very briefly relate states of a much higher, or more interior character, and differing, in some respects essentially, from the observed facts of ordinary mesmerism.

32. Frequently during the spring and summer, Emma would, in the mesmeric state, speak of the scenery and nature of the spirit-world, in such a way as to impress the beholder with a conviction that the descriptions she gave could not be the result of any previously acquired knowledge, or of an active imagination. She also occasionally spoke of things which had actually occurred, but which it was impossible for her to know by any ordinary means. Her ideas of religion were principally derived from the teachings of a village schoolmistress, in connection with the Church of England, and from occasional attendance at the public services of the church. She had been taught to read a little when a child, but had lost the acquirement through a fever; and, as before observed, at this time she could not read, nor even correctly tell the letters of the alphabet; and yet the ideas to which she sometimes gave utterance were of an elegant and exalted description. As she still continued to have no recollection of what she uttered when she returned to the normal state, I one day said to her, "Emma, I have heard of some persons having seen such things as you speak of, but they could recollect what they saw, and write an account of it in books." She replied, "Yes; because it was permitted them; *and she should also be permitted by and by to recollect what she saw.*" I did not tell her this when she awoke; nor did I expect then that her prediction would be verified. But subsequent events proved that she was correct in making this assertion.

33. The first of these spontaneous states of extasis, or spiritual trance, occurred on the 3rd of July, 1848, without any expectation or forewarning on her part. This did not last more than a quarter of an hour. Afterward she had several which

lasted about half an hour; and since those, some which have extended from four to ten hours. Of most of these states, she had a presentiment *while in the mesmeric state;* and in one instance foretold the occurrence nearly two months before it happened. But she knew nothing of what was forthcoming while in her ordinary wakeful state; and for the sake of experiment, and to test the truthfulness of her predictions, she was never informed when these trances were to occur; yet she was found correct, even to the exact time. They have usually been preceded by a feeling of quietness, and a somewhat confused sensation in the head, but no pain. Several gentlemen whom I had apprised of her statements, have been witnesses of their accuracy, and of the *genuineness* of this abnormal condition.

34. In these states she preserved a recollection, at times, of the place she was actually in, and of the persons by whom she was surrounded, and, at the same time, she had a distinct and *sensational* perception of a higher and spiritual state of existence, and of a class of beings living in such a state. She would speak of these things while in the trance, and on her return to the normal state she could recollect, and would again describe what she had seen and heard. During the first trance, of four hours duration, which occurred on the 28th of September, 1848, she was so far elevated in her perceptions that she spoke of *this* world, as the *other* world, just as if she had passed from this life by death. She said, also, that the perons in the room with her appeared only like shadows, and a long way from her. Upon examination she was found, in this and other trances, insensible to pain, and her eyes upturned, as in the ordinary mesmeric state, and her limbs continued flexible. At times she would seem wholly indrawn, and then she would, as it were, return and speak of what was passing before her mental vision. But in the next trance, of six hours' duration, and subsequently, she became for a part of it quite insensible to all outward things, and perfectly cataleptic from head to foot. A gentleman from Manchester, who was present with me on this occasion, assisted me to raise her body, and we found it as stiff and inflexible as a log of wood.

35. I took the opportunity, during one of these trances, to ascertain whether she could see concealed natural substances, as in the ordinary mesmeric state. I put my hand in my pocket and withdrew it with a shilling concealed in the closed fist. I inquired, "What have I in my hand?" "Only a shilling," was the immediate reply. It must be remembered that the eyelids were closed, and the eyeballs up-turned, so as totally to prevent ordinary vision. I then put my hand into my pocket again, and withdrew it with a half-a-crown and a shilling enclosed, and asked her, "Can you see what is *now* in my hand?" she replied, "Stop a little, till I've seen these," alluding to the spiritual objects then engrossing her attention; but when I again asked her, she was about coming out of the trance, and could not then see.

36. One instance of her sight will be related, because it is a proof that there is *a reality* in her extatic perceptions, and that she then eminently possesses a super-sensual gift. On the 11th of July she told me, when in the mesmeric state, that an individual whom I well knew, but who had been dead for some years, had told her that on the following night they should come to her, and show her a book with some writing in, which she was to take and show to me. From some of her remarks, I concluded that one of three books was intended:—one, a small bible, *not then in the house.* Former experience having convinced me of the reality of her observations, and the certainty of her predictions, I got this little bible, and put it with the other books, among many more. In the night she awoke in a state of trance, similar to somnambulism, and descending two flights of stairs, selected this book from all the others, and then brought it open to me. Owing to the darkness, I inadvertently knocked the book out of her hand, while seeking a light. She speedily found the place again, by turning over the pages right and left, over her head, in her usual mesmeric manner. The passage selected was Joshua, chap. 1st, verses 8, 9. Frequently afterward, by way of test, this bible was given to her to point out this text; and this she invariably did before many persons, without attempting to look at it, but by feeling the pages and

turning them over while the book was over her head. She also told me circumstances connected with the history of that book, which I am positive she could not know by any of the usual means; for some were only known to myself. She was asked to tell by what means she found the passage, as she could not read, and was also in the dark. She replied, that the individuals alluded to, whom she said she saw in their spiritual body, had a similar book, but a larger one, open upon the left arm, and that they pointed with the right hand to the pages, and the same text; that her hands seemed guided in their movements, and when she had got the right place, she could no longer turn the pages, either to the right or to the left! Another instance of a similar kind occurred a few weeks later. After the lapse of some months, she was again tried with the small bible; but having then lost the connecting influence, she could no longer find the passage as she had previously done.

37. The subjects of these trances would afford matter for many pages; but some were of a private character, and, although highly interesting to the parties concerned, would not be interesting to others, except as illustrating the nature of the spirit's home, and some of the general laws by which spiritual associations are regulated. All that she has said tends to confirm the distinction between moral good and moral evil, and the impossibility of those who depart this life in a state of moral evil, attaining hereafter, to a state of moral goodness; in *this respect*, being strikingly dissimilar to the statements of Davis, the American clairvoyant; but who, according to his own subsequent statements, had never been in the state of true spiritual extasis, when he delivered his lectures in the mesmeric state.

38. Her general statements represent man as a spiritual being, rising from the shell of the dead body immediately after death, a perfectly organized existence, and having a complete *sensational perception* of his fellow spiritual beings, and of the beautiful scenery of the spiritual spheres; that is, provided he possessed during his natural life a moral state, in harmony with those spheres. The male and female sex retaining all the characteristcs necessary to a spiritual state of existence, and

living together in a state of angelic union. Those who have been interiorly united here, coming again into a state of union hereafter. She represents male and female spiritual beings, thus united, as appearing at a distance *as one*, and says that they are not called two, nor the married, but *the* ONE. Infants and young children, who have passed from this world by death, are stated to grow to a state of adolescence, but more speedily than in the natural world. During infancy and early childhood, they are confided to the care of good female spirits, or angels, whose delight it is to instruct them by various methods, especially *by representatives of things.* These spiritual spheres, and their spiritual inhabitants, are in close association with us, and exercise an influence over us, although we are unconscious of it. All that is wanted to have a *sensational* knowledge of their existence, is the closing of the external consciousness, and a full awakening of the internal consciousness. In the highest state of trance, she appeared to herself, to be among spiritual beings, as one of themselves; at other times she appeared to them more shadowy. The first receptacle of the departed spirit she describes as a sort of middle place or state, from which the good gradually ascend to higher and more delightful places; those that are the best having higher abodes than the others. All are welcomed by angelic spirits, on their arrival in the spirit-world; but the evil will not associate with the good, and recede of their own accord, more or less rapidly, to darker places below and to the left; but of these darker places, she had not been permitted to know so much as of the abodes of the good.

39. Being asked, in one of these long trances, if she now could explain *how* she saw distant individuals in the mesmeric state; she said, "Yes; I can see how it is now, but I could not before;" and then stated that if spirits wished to see each other, distance is no interruption; and words to the effect that spirits are not subject to our laws of space and time; and that man, *as to his spirit*, is a subject of the laws of the spirit-world, even while united to the natural body. The opening of her spiritual consciousness, gives her a *sensational* perception of the spirits

of all to whom her attention is directed; and thus, however distant the individual, he can be mentally present with her. But this she further represented, as being accomplished by the aid of intermediate associate spirits, by whom the connection is completed; and she further represented every one, as having a connection with the spirit-world *generally;* and a more *particular one*, by means of this associate spirit. Whenever Emma speaks of going into a trance, she always represents it as "*going away*," and "*going a very long way*." Of any one that is dead, she says, "They have left their shell and gone away," and will never admit that they are dead.

40. In the mesmeric state, Emma represented the fibres of her brain as falling forward, and the hemispheres separating at the top, when she became lucid; and she further said, that a brain capable of these movements was necessary in order to attain a state of lucidity. In one of the spontaneous trances, I asked her if she could see me in the same manner as when mesmerised. She replied, that she had no recollection of the state of her brain while in the mesmeric state; but that in the state she then was, every thing seemed light, or rather was seen in light. She knew that she did not see with the eye, and yet somehow she seemed to use her eyes. She saw me plainly; yet I did not appear as I ordinarily did; she could not explain the difference, only that I appeared light. It appeared to her, that light issued from within, outward. During a subsequent long trance, I inquired whether she could see my lungs then as she had done when mesmerised. She replied in the negative, and said, "I can only see you as a cloud; yet I know it is you."

PRACTICE AND USE OF MESMERISM.

41. The induction of the mesmeric sleep, or the practice of mesmerism as a curative agent, is a very simple process. I am inclined to believe, that the result depends more on the pecu-

liar constitution of the subject, than the power of the mesmeriser All that is required, is patience, and a proper disposition in both parties. Let the subject sit down in the easiest and most comfortable posture. The operator should be seated in front, and take both hands of his patient in his left hand, placing his right hand on the head. Then gently and slowly continue to make passes forward over the face—the operator looking steadfastly at the eyes of the subject. The room should not be too light, and every thing kept quiet. The subject should keep his eyes fixed on those of the operator, and yield himself unreservedly to his influence. If this course is persevered in for twenty or thirty minutes, some effect will generally be observed; and if the subject is susceptible, probably within five or ten minutes the sleep may be induced. If the front passes do not succeed, then it will be well to try backward passes from the forehead, over the head and partly down the spine, each party steadfastly regarding each other's eyes as before.

42. As a general rule, more striking effects may be expected, when the sleep can be produced; but it must not be forgotten that good may be done where the patient cannot go into the state of coma. Where the object is to relieve pain, first try to produce the coma; but if not practicable, or the patient objects, then simply make passes with both hands *downwards*, slowly and gently, over the parts affected, allowing the fingers lightly to touch the person of the patient, and *well shaking the hands* after each pass. This may be smiled at by the incredulous and inexperienced in these matters; but I have had proof that disease may be put into the system, and transmitted by passes from one subject to another. In cases of what are called nervous headaches, the passes should be made from the forehead over the head to the nape of the neck; and then from the forehead along the base of the brain; that is, just over, and behind the ears and a little way down the neck, and then shake the hands after each pass, as before. This will generally relieve headache in five or ten minutes, if properly performed. No fear need be felt as to the arousing of the patient. Fresh patients will generally awaken spontaneously. But by continued

back and *upward* passes, from the chest over the face and head, or by upwardly fanning the face, the patient will be aroused.

43. The curative influence of mesmerism, as it proceeds primarily from the will of the operator, though generally requiring the proper manipulations to make it susceptible, I propose to call PARAPSYCHEISM, from the Greek words *Parapsyche*, to soothe or comfort, *psyche*, the animal soul or mind.

44. The diseases to which parapsycheism, or the curative influence of mesmerism, may be most beneficially applied, are those of the brain, and nervous and functional diseases. Painful affections of the head, incipient and partial insanity, determinations of blood to the brain, giddiness and stupor, delirium tremens, and other affections of the brain may be, in most cases, speedily relieved by the application of the parapsycheic, or mesmeric influence, especially if combined with proper medical treatment, and due management. But none of the old system of treatment, bleeding and blistering, setoning and purging, must be allowed. The same remark applies to the whole range of neuralgic, and what are called rheumatic affections; and organic, as well as functional diseases of the heart, liver, and lungs. In all painful cases, it would be well to endeavor to bring this soothing influence into operation. No harm will ever be done, if the passes are made in the manner directed, and with a proper feeling and desire to do good. But while censuring the old practice of medicine, in the cases above alluded to, fairness obliges me to say that equal blame attaches to some enthusiastic mesmerists, who, from their partial knowledge are led to despise and misrepresent *all* medical treatment. The very circumstance of true clairvoyants prescribing medicines, proves that those most under its influence perceive mesmerism to be only one among other means of restoring and preserving health.

45. But the full use of mesmerism, as a curative agent, will never be thoroughly known until there are better opportunities for its practice than at present exist. It cannot be expected that medical men should generally be the actual mesmerisers, as they would not be able, except in a few cases, to bestow the

necessary time. It, therefore, requires a class of trained male and female mesmerisers to act under the superintendence of qualified medical practitioners, and perhaps it would be most successfully carried out in establishments similar to Hydropathic Institutions, but more universal in their means of cure.

46. In conclusion, I would observe to those who may read these pages doubtingly—experiment for yourselves, not confining your attention to one or two cases, but patiently investigating wherever opportunity offers; and the probability is, that you will speedily be convinced, by actual observation, of the general truths of mesmerism, and of its efficacy, as an agent for the relief of human affliction.

THE following appeared in the LONDON TIMES of September 13, 1849, and has been kindly sent us by WILLIAM TURNER, M.D., of New York.

A STRANGE STORY.

[From the Bolton Chronicle.]

ON Saturday, July 14, a letter was received by Messrs. C. R. Arrowsmith & Co., of this town, from Bradford, Yorkshire, containing a Bank of England note for £500, another for £50, and a bill of exchange for £100. These Mr. Arrowsmith handed over, in the regular mode of business, to Mr. William Lomax, his cashier, who took, or sent, as he supposed, the whole to the bank of Bolton, and made an entry accordingly in his cash-book. The bank-book was then at the bank, so that no memorandum of the payment was received or expected. After the expiration of about five weeks, upon comparing the bank-book with the cash-book, it was found that no entry for these sums was in the bank-book. Inquiry was then made at the bank, but nothing was known of the money, nor was there any entry existing in any book or paper there; and, after searching, no trace could be found of the missing money. In fact, the parties at the bank denied ever having received the sums, or knowing any thing of the transaction. Before the discovery of the loss the bill had become due, but upon inquiring after the loss was discovered, it was found that it had not been presented for payment. It was, therefore, concluded that as the notes and bill could not be found at the bank, nor any trace or entry connected with them, the probability was that they were lost or stolen, and that the bill had been destroyed to avoid detection. Mr. Lomax had a distinct recollection of having received the notes, etc., from Mr. Arrowsmith, but from the length of time that had elapsed when the loss was discovered, he could not remember what he had done with them—whether he had taken them to the bank, or sent them by the accustomed messenger—nor could the messenger recollect any thing about them.

As might be expected, this unaccountable loss occasioned great anxiety to Mr. Lomax, and in this emergency he applied to a friend, to whom the discovery of Mr. Wood's cash-box was known, to ascertain the probability of the notes, etc., being found by the aid of clairvoyance. The friend replied that he saw no greater difficulty in this case than in Wood's, and recommended him to make the inquiry, which he said he would do, if only for his own satisfaction.

On Friday, August 24, Mr. Lomax, accompanied by Mr. W Jones, of Ashbourne street, Bolton, called on Mr. Haddock for this purpose. The clairvoyante was put into a psychic state, and then into connection with Mr. Lomax. She directly asked for "the paper," meaning the letter in which the notes and bill were inclosed; but this Mr. Lomax did not appear to have in his possession, and she said she could not tell any thing without it. This sitting, therefore, was so far useless. The next day Mr. Lomax brought the letter, and Mr. Haddock requested that the contents might not be communicated to him, lest it should be supposed that he had suggested any thing to her. After considerable thought, the clairvoyante said that there had been three different papers for money in that letter—not post-office orders, but papers that came out of a place where people kept money in (a bank), and were to be taken to another place of a similar kind; that these papers came in the letter to another gentleman (Mr. Arrowsmith), who gave them to the one present (Mr. Lomax), who put them in a paper, and put them in a red book that wrapped round (a pocket-book). Mr. Lomax then, to the surprise of Mr. Haddock, pulled from his coat-pocket a deep, red pocket-book, made just as she had described it, and said that was the book in which he was in the habit of placing similar papers.

Mr. Lomax said the clairvoyante was right; that the letter contained two Bank of England notes and a bill of exchange; but did not say what was the value of the notes. Mr. Haddock then put a £10 Bank of England note into the clairvoyante's hand. She said that two of the papers were like that, but more valuable, and that the black and white word at the corner was longer. She further said that these notes, etc., were taken to a place where money was kept (a bank), down there (pointing toward Deansgate). Beyond this no further inquiry was made at that sitting.

On Monday, Mr. Lomax called again. The clairvoyante went over the case again, entering more minutely into particulars. She persisted in her former statements, that she could see the "marks" of the notes in the red pocket-book, and could see them in the banking-house; that they were in paper, and put along with many more papers in a part of the bank; that they were taken by a man at the bank, who put them aside without making any entry, or taking any further notice of them. She said that the people at the bank did not mean to do wrong, but that it arose from the want of due attention. Upon its being stated that she might be wrong, and requesting her to look elsewhere, she said that it was no use; that she could see they were in the bank, and no where else; that she could not say any thing else, without saying what was not true; and that if search were made at the bank, there, she said, they would be found. In the evening, Mr. Arrowsmith, Mr. Makant, and Mr. Jones came again, and she was put in a psychic state, to repeat these particulars in their presence, which was done.

Mr. Haddock then said to Mr. Arrowsmith, that he was tolerably confident that the clairvoyante was right, and that he should recommend him to go next day to the bank, and insist on a further search, stating that he felt convinced, from inquiries he had made, that his cashier had brought the money there. Mr. Makant also urged the same course on Mr. Arrowsmith.

The following morning (Tuesday, August 28), Mr. Arrowsmith went to the bank, and insisted on further search. He was told that, after such a search as had been made, it was useless, but that, to satisfy him, it should be made again. Mr. Arrowsmith left for Manchester, and after his departure a further search was made; and among a lot of papers, in an inner room of the bank, which were not likely to have been meddled with again probably for years, or which might never have been noticed again, were found the notes and bill, wrapped in paper, just as the clairvoyante had described them.

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